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A COURSE OF LECTURES ON SYPHILIS.

DELIVERED AT THE SCHOOL OF MEDICINE, GROSVENOR-PLACE, ST. GEORGE'S HOSPITAL, SESSION 1841-42.

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Lecture X.

Gentlemen,—On entering upon the study of the effects of any particular animal poison upon the human body, with the intention of undertaking the responsible duty of conducting a patient safely, and with as little delay as possible, through the many dangers and varied sufferings to which he becomes liable after the first introduction of such poison into his system, it appears to me incumbent upon us to consider well the general laws relating to the actions of poisons, whether mineral, vegetable, or animal, upon the animal economy; and to carefully notice the natural powers which, when recovery takes place, spontaneously develop themselves, in order either to defend the system against the injurious agency of the poison, or ultimately to eradicate it from the constitution.

With these objects in view, I shall first direct your attention to the mode in which poisons enter the system, and I think I shall be able to adduce ample evidence that it is invariably by the circulating blood that this is effected; however speedy or however prolonged its action may be, whether the poison is to produce death by interfering with the functions of the brain, heart, lungs, or any other vital organ, or whether it is to act upon any essential constituent of the blood, or of particular tissues. Numerous ingenious and to me convincing experiments have been performed by various physiologists, tending to prove this position, some of which I shall relate to you; but it is right that I should inform you that many pathologists still conceive that it is by the "sentient extremities of the nerves" that poisons enter the system, and produce their deleterious influence.

You will perceive that this is not merely an amusing physiological question, but one which must have most important practical bearings. You will be called upon as medical practitioners to administer remedies for the purpose of arresting the progress, or counteracting the injurious agency of poisons which may have been received into the system. It surely must be of consequence to determine whether your curative endeavours are to be directed to the nervous or to the vascular system,—whether your enemy lurks in one position or in another; and I think you will admit that the means you would adopt under the one notion would not be the same as those you would employ under the other. I shall now select some of the experiments to which I have alluded.

Magendie exposed the external jugular vein in a dog, and having separated it from its cellular attachments, placed a piece of card underneath the vessel, so as to isolate it from the surrounding parts, he now applied to the centre of the vein an aqueous solution of the spirituous extract of nux vomica. In four minutes the symptoms of poisoning made their appearance. The same experimentalist, having previously stupified a dog with opium, divided all the structures of its hind leg, with the exception of the femoral artery and vein, through which the circulation was carried on. He then inserted the upas tieuté poison into the foot of the mutilated limb. The animal was poisoned in the usual space of time required for this substance to take effect. He repeated the same experiment with the additional precaution of placing inert tubes in the artery and vein, and afterwards dividing these vessels; the limb was thus connected to the animal's body by the tubes only, through which the blood passed to and from the limb. The same effect followed on the introduction of the poison.

Again, Segalas included a piece of intestine between two ligatures in a living ani-

mal, and tied all the blood-vessels leading to it, excepting one artery. An aqueous solution of nux vomica was now injected into the piece of intestine, and there secured for an hour, without producing any symptoms; but on removing the ligature from one of the veins the poison took effect in six minutes. Emmert applied a ligature to the abdominal aorta in a dog, and afterwards inserted prussic acid into the foot of one of the hind legs. No ill effects followed in seventy hours: the ligature was then removed, and in half an hour symptoms of poisoning appeared.

Fontana instituted some experiments with the intention of proving the correctness of the theory attributed to Hoffmann, namely, that the sentient extremities of the nerves were the agents by which poisons were introduced into the animal system, but they led him to an entirely opposite conclusion. He exposed the sciatic nerve in several rabbits, and applied the venom of the viper, prussic acid, and other poisons to it, having carefully provided against the possibility of the poisons coming in contact with the other structures: the animals remained unaffected. He now injected these poisons into the veins, and the animals were instantly destroyed.

In pursuing this subject further, having exposed the leg of a pigeon to be bitten by a viper, he amputated the limb before the symptoms of poisoning made their appearance, which was generally not till a few minutes had elapsed: the animal, nevertheless, died. On frequently repeating this experiment, he found that unless the limb were removed within twenty-five seconds after the introduction of the poison, the result was as certainly fatal as if the operation had not been performed.

A very ingenious but complicated experiment instituted by Messrs. Addison and Morgan, would at first sight appear to favour the opinion that the nerves and not the blood were the conducting media of poisons. The carotid artery and jugular vein of one dog were connected with the corresponding vessels of another; and the arrangement was made reciprocal, but of course on one side only in each animal, so that a portion of the arterial blood of the one animal was conveyed by one carotid artery to the brain of the other; while the corresponding jugular vein of the recipient animal conducted the blood back not into its own vessels, but into those of the animal from which it had received the supply. It was supposed by this arrangement that a complete interchange of the blood circulating in the two animals would be effected, and that if poisons acted through the blood, on introducing them into one animal both ought to be nearly equally affected. The poison of nux vomica was now inserted into the back of one of these animals, which destroyed it as usual, but the other was not at all influenced by it.

As great stress has been laid upon this experiment, it will be as well to consider more fully how the sound animal would be circumstanced; in the first place, with respect to the stream of arterial, then to the stream of venous blood supplied to it by the poisoned animal. This, I think, will be better accomplished by tracing the poison from its first introduction, supposing it to follow the circulation of the blood. The poison would be first returned with the venous blood to the heart of the poisoned animal; from thence it would pass through its lungs, and to the heart again, before it entered the arch of the aorta. Three streams of the blood containing the poison would be now conveyed by the two vertebrals and one carotid to the brain of the poisoned animal, while one stream of it only could reach the brain of the animal which remained unaffected. This same stream, or the greater portion of it, would be returned by the corresponding jugular vein into the vessels not of the sound but of the poisoned animal. Again, with respect to the veins, the two jugulars and the two vertebrals would return the blood from the brain of the poisoned animal; only one of these could convey any blood to the sound animal. The necessary obstructions where the tubes were connected to the vessels, or arising from the motions of the animals, would all be in favour of the sound animal receiving but little if any of the poisoned blood. The blood in the veins on meeting with obstruction would readily pass by anastomosing branches into the other venous trunks; and the carotid and vertebral arteries so freely communicate, that a considerable downward current would require to be overcome before the poisoned blood could reach the brain of the sound animal through its connected carotid. It should also be remembered that the lymphatic system of the poisoned animal was entirely unconnected with that of the sound one. Mr. James Blake, moreover, in his valuable papers on poisons, states, that on repeating this experiment, and applying the hæmadynamometer, an instrument which measures the pressure or force of the circulating blood within the vessels, it was evident, on account of the weaker circulation of the animal into which the poison was inserted, that the sound animal alone afforded blood to the one that was poisoned.

If Messrs. Addison and Morgan had selected a part of the body where one artery and one vein would convey the entire blood of the part, as is the case in the lower extremity, and had the one animal only been destroyed, the experiment would have been conclusive. Vernière, however, has sufficiently proved that the result would have been very different. He applied a ligature tightly round the leg of an animal, so as to stop the circulation of the blood, and then inserted the extract of nux vomica into its foot, but

without any effect. He now loosened the ligature carefully, so as to permit the arterial blood to enter the limb, but to prevent the return of the venous blood. A vein was then opened below the ligature, and the blood collected, which, when injected into the vessels of another animal, immediately destroyed it, while the animal into whose foot the poison had been inserted perfectly recovered.

Mr. James Blake, in his Physiological Essays on the action of poisons, relates an experiment performed by himself, directly bearing upon this question. "The abdomen of a dog was laid open. A ligature was passed under the vessels entering the liver, and tied. Three drachms of hydrocyanic acid of Scheele's strength, containing 3.3 per cent. of acid, were introduced into the stomach through an opening in its parietes. The poison was thus brought into contact with a large surface, freely supplied with nerves, at least with those nerves on which poisons are supposed more particularly to produce these impressions. (See Addison and Morgan on Poisons, p. 35.) Under these circumstances the poison remained in the stomach ten minutes, without producing the slightest general effect. The ligature on the vena portæ was then removed, so as to restore the circulation over the viscera. One minute after the removal of the ligature the animal began to experience the effects of the poison. The ligature was again replaced; but before this could be effected a sufficient quantity of the poison had been absorbed to arrest the respiratory movements, and the animal must have speedily perished, had not artificial respiration been had recourse to. After this had been continued eight minutes, the animal was sufficiently recovered to continue the respiratory movements itself. After a short interval the ligature from the vena portæ was again removed. The animal was dead in two minutes. This experiment affords a strong proof of the non-action of poisons when merely applied to the extremities of nerves; for not only did the poison produce no effect before it entered the circulation, but we find the animal recovering from the effects of the poison, with three drachms of hydrocyanic acid still in its stomach."

The rapidity with which death follows the application of hydrocyanic acid, the woorara poison, and some others, which has been described as instantaneous, was considered to be explicable only on the supposition that the nerves conveyed the poisonous influence to the brain, with the same velocity that they conducted their ordinary impressions to that organ. But Mr. Blake, by numerous varied and well-conducted experiments, has completely set this matter at rest. Time will only permit of my mentioning his conclusions; for the experiments themselves I must refer you to his papers read before the Royal Society, and which you will find published in the "Edinburgh Medical and Surgical Journal," Nos. 142, 148, and 149. In my opinion he has there most satisfactorily proved,—"First. That the time required by a substance to permeate the capillary vessels may be considered inappreciable. Second. That the interval elapsing between the absorption of a substance by the capillaries, and its general diffusion through the body, may not exceed nine seconds. Third. That an interval, always more than nine seconds, elapses between the introduction of a poison into the capillaries or veins, and the appearance of its first effects. Fourth. That if a poison be introduced into a part nearer the brain, its effects are produced more rapidly. Fifth. That the contact of a poison with a large surface of the body is not sufficient to give rise to general symptoms, as long as its general diffusion through the body is prevented." He has drawn up the following table, deduced from his experiments, to show that these rapidly fatal poisons act in different animals in the exact ratio of the rapidity of the circulation:—

Time required for the blood to pass from the jugular vein to the capillary terminations of the coronary arteries:

In the Horse	16 seconds
Dog	11 to 12
Fowl	6
Rabbit	4

Time that elapses between the introduction of a poison into the jugular vein, and the first symptoms of its action:

In the Horse	16 seconds
Dog	12
Fowl	6½
Rabbit	4½

If what I have here brought before you, with respect to the more virulent and all but instantaneously fatal poisons, has convinced you that they act through the medium of the blood, and that the nervous system is circumstanced exactly as the other tissues of the body with respect to them, namely, that the poisons being in the blood are conveyed to the organs and tissues with the vital fluid, and thus produce their pernicious and fatal influences; some corrupting one organ; some another; some spoiling the whole mass of blood by acting upon one of its essential constituents, and thus deranging the nutrition of all structures requiring that constituent; if, I say, you are convinced that the rapidly fatal poisons act through the blood, there will be no difficulty in satisfying you that those which produce their effects more slowly on the animal system, as is the case with the poison of syphilis, of small-pox, of glanders, &c., do so through the agency of the blood; for the very slowness of their action renders it improbable that the nerve is the conducting

medium. Indeed, our notions with respect to the instantaneous passage of the will, or of sensation by the nerves, appears to have misled physiologists with respect to those poisons which may be said, comparatively speaking, to be instantly fatal. But as regards glanders, direct proof can be given; and with respect to syphilis and small-pox, although indirect, yet pretty convincing, evidence can be adduced that these poisons are in the blood, and may be propagated by the blood.

Professor Coleman transfused the blood of a glandered horse into the vessels of an ass which had been previously bled. The ass was attacked with glanders, "rapid and violent in degree;" and from this animal others were inoculated. Both glanders and farcy were the result. The poison of syphilis and of small-pox cannot be transferred to animals; we have not, therefore, the same experimental proof, but, as I have stated in a former lecture, the fœtus in utero becomes contaminated with the syphilitic poison; and even the milk of a person labouring under secondary or constitutional syphilis will communicate the disease to an infant. And I am not aware that any physiologist has denied that the nourishment of the fœtus in utero is derived from the blood of the mother, or that the milk is a secretion from the blood. In reference to the small-pox poison, we have equally strong evidence that it is transmitted by the blood of the parent to the fœtus. Instances are on record of children being born with an eruption of small-pox, both when the mother has had the disease at the time, and also when she has been exposed to it a short period previous to childbirth, but having formerly had small-pox, is herself no longer susceptible of it. The fœtus has, nevertheless, taken the disease. Children have, moreover, been born marked with small-pox, proving that they have undergone the disease in utero, and have remained as completely unsusceptible of it in after life, as tested by inoculation, as if they had had it subsequent to birth: and this has occurred when the parent has gone through the disease during her pregnancy, as well as when she had gained her immunity by having been formerly attacked by it. From these data, Gentlemen, I think we are warranted in considering it an established fact, that the syphilitic virus, as well as all other poisons, are in the blood, and that they produce their effects on the different organs and tissues through the medium of that fluid. You will find that, throughout this course of lectures, I shall steadily bear this circumstance in view, and that I shall consider all the remedial means employed in the treatment of this disease in reference to their influence upon the virus, as situated in and carried to the tissues by the circulating vital current.

In connection with this part of our subject, I will now beg your attention to the channel by which poisons enter the blood. You will find that it is either by direct insertion into this fluid contained in its proper vessels, as is the case in inoculation, and in all recent poisoned wounds; or by endosmosis and exosmosis through the thin parietes of the capillaries, whether of blood-vessels or lymphatics. Mucous membranes, therefore, an ulcerated surface, an exposed serous membrane, the cutis unprotected by the cuticle, or when the cuticle has been permeated by the poison, all present the necessary conditions for the absorption of a poison. The other requisite is, that the poison itself should be either in a fluid or gaseous state. As I have elsewhere remarked (article Lymphatic System in Dr. Todd's Cyclopædia of Anatomy and Physiology), the capillary blood-vessels are permeated entirely in accordance to physical laws; but not so the lymphatics and lacteals, which appear to possess a selecting power as a vital endowment, for they do not indiscriminately absorb all fluids brought in contact with them, but ordinarily reject those which are not nutritious. I will here beg you to observe, that when we find the absorbent vessels inflamed—from conveying poisonous matter, it is generally an animal, not a vegetable or mineral poison that has been applied—as we see in syphilis, the dissecting-room poison, in glanders, and farcy, &c.

It has been noticed that serous membranes allow of the absorption of poisons more readily than mucous; and, again, that certain mucous membranes possess this property to a greater extent than others: for instance, the respiratory, to a greater extent, than the alimentary. This has not been satisfactorily accounted for. The decomposing power of the secretion of the particular membrane will probably in part explain this. It is known, for instance, that the poison of the viper, of syphilis, and many others, may be swallowed with impunity; but it must be confessed, that their action upon other mucous membranes, and upon serous membranes, is not well understood.

In order that we may the more readily comprehend how so minute a quantity of poisonous matter can have the effect of vitiating the entire mass of blood, as we find is the case in small-pox, syphilis, in the venom of the viper, or in hydrophobia, in the poison of arsenic of prussic acid, or the worrara, it will be necessary to bear in mind, 1stly, the very high combining numbers of most of the animal compounds; 2ndly, the small quantity of some of these, even in the whole 30 lbs. of blood, which is the quantity estimated to exist in an adult person;* 3rdly, the low

* See a most useful table framed by Mr. Ancell, in which the quantity of each constituent in the entire mass of blood is shown, Lancet, Nov. 30, 1839, in that gentleman's 4th Lecture, Table IX.

combining number of some of these poisons. Reasoning upon these data, you will be surprised to find how small a quantity of a substance combining with one of the essential constituents of the blood may appropriate the whole of it, and thus cause death either by its absence, or by the production of some new compound which may be incompatible with life, or at any rate with the healthy condition of the organs or functions of the body. Mr. Ancell, to whom I am indebted for this mode of reasoning upon the subject, has favoured me with an application of it as regards the fibrin of the blood, which I will take the liberty of reading to you:—

"Fibrin, which plays so important a part in the phenomena of life, may be regarded in a chemical point of view as a compound of 20 equivalents of the organic principle protein, 2 equivalents of sulphur, and 1 of phosphorus; or of 8740 parts of protein, a definite compound of oxygen, hydrogen, carbon, and azote, 32 parts of sulphur, and 16 of phosphorus. (Mulder.) The whole of the fibrin of the blood contained in the vessels of a healthy adult at one time is estimated at 392 grains (Lancet, 1839-40, vol. i., p. 316, Table IX.), which quantity must contain less than one grain and a half of sulphur as an essential constituent. Any substance, therefore, which introduced into the blood is capable of abstracting this small quantity of sulphur from its fibrin, would probably destroy, in a very few moments, the coagulating power of the whole mass of circulating fluid.

"Let us suppose arsenic to be such a substance. Its equivalent number is 38, that of sulphur being 16. The per-sulphuret of arsenic is a compound of 2½ equivalents of sulphur and 1 of arsenic, or 40 parts of the former to 38 of the latter; accordingly, less than a grain of arsenic would decompose all the fibrin of the blood of an individual adult.

"Again, let any substance, hydrocyanic acid for instance, be assumed as capable of forming a definite compound with the fibrin in the living vessels, the equivalent of the acid being 27, and that of fibrin 8788; then, should they combine in the proportions of one equivalent of the former to one of the latter, the whole of the fibrin of the blood would be converted into a new compound, with new properties, probably incompatible with life, by the agency of about one grain of pure hydrocyanic acid.

"These may be taken as analogues of what actually occurs in many cases of acute poisoning.

"In the more chronic forms of poisoning, that from the venereal virus for instance, the material introduced into the blood must disturb the molecular action of, or enter into combination with, some of the complex constituents of that fluid less essential than fibrin to the life of the individual."

Professor Liebig has drawn an interesting comparison between the process of fermentation and the action which is excited by the introduction of certain poisons into the blood, which may not be altogether devoid of instruction. He points out that in the process of fermentation the yeast, which is oxidised gluten undergoing putrefaction, effects a decomposition in the sugar of the wort, by which it becomes converted into alcohol and carbonic acid; while the gluten, which the wort also contains in large quantity, undergoes oxidation, so that the original yeast employed appears to have multiplied itself perhaps a hundred-fold. But if the yeast had been placed in a solution of sugar free from any gluten, the conversion of the sugar into carbonic acid and into alcohol would have been equally effected, but instead of the yeast being reproduced in greater quantity, it would have entirely disappeared. Now, we see that in small-pox, when the poison is once introduced, an action is set up by which a conversion takes place of some of the constituents of the blood or of the solids into a matter similar to itself, and that when the disease has run its course, the system is no longer susceptible of this action, and can no longer reproduce the poison, any more than yeast can be produced in a solution of sugar undergoing fermentation after the gluten has been exhausted. He argues, therefore, that the poison has acted upon some element originally in the blood, but which is not essential to life, and which, when once removed, is not reproduced. Thus he would explain the mode of action of all poisons which are contagious or infectious, and which leave the system unsusceptible of a second attack, such as measles, scarlatina, small-pox, &c. While in those poisons of which the system remains susceptible as often as the poison is applied, as in syphilis, the venom of the viper, the dissecting-room poison, and most others, especially mineral and vegetable kinds, he would say that they acted on an element of the blood essential to health, if not to life, but which is constantly being supplied, just as in fermentation; if gluten were constantly added to the fermenting fluid, yeast would continue to be formed capable of inducing the same action in a fresh solution of sugar. Under this hypothesis it is easy to explain the extraordinary powers of the two poisons of small-pox and cow-pox, each reciprocally, in rendering the system incapable of carrying on the diseased actions peculiar to them. We have only to suppose them to act upon the same constituent of the blood, and to continue to appropriate every particle of it in reproducing themselves, as is the case with the yeast in fermentation, as long as any gluten remains in the saccharine solution; but if by any other means the gluten can be separated, the reproduction of yeast would immediately cease.

Another question to which I had proposed to direct your attention in the present lecture still remains to be considered; namely, admitting it to be established that poisons enter the blood, and act either upon that fluid or through it upon the several structures and organs of the body, what general laws do we observe to regulate those salutary efforts of the system by which the effects of poisons are either resisted or ultimately eradicated from the constitution, and which it becomes equally the duty of the surgeon to study and take as his guide?

THE

PHYSIOLOGY AND PATHOLOGY

OF

THE SALIVA.

By Samuel Wright, M.D. Edin., F.S.A., Physician to the Birmingham General Dispensary, &c. &c.

(Continued from p. 76.)

DIGESTIVE PROPERTIES OF SALIVA.

It has been imposed upon the scientific world that the observations concerning the peculiar action which saliva is capable of exerting upon starch and other such matter are of modern date. But it happens that this discovery, like many others professedly originating in our own age, is only an echo of antiquity. The taxation of research is a rather severe one; but it has the advantage of keeping a check upon that prevalent system of imposture which, regardless of names and of dates, will flagrantly violate the history of mankind in assigning unto a plagiarist the merits of his predecessor. A desire not to be classed with those who regard a literary theft as less amenable to a code of morals than the more palpable acts of felony, is my apology for an extent of reference which otherwise might be tedious. As in the preceding instances, so in this, before detailing my own experiments I shall give, to the best of my ability, a record of the observations of previous authors concerning the digestive properties of saliva; whence it will be seen that many of the older writers were as intimately acquainted with these properties as are those of the present day who flatter themselves with the discovery.

"Salivam ob insignes suas, ac penè innumerabiles virtutes, quas in nobis fundendo, solvendo, abstergendo, ac celeriter penetrando producit, quæque paucis notæ, et à paucis quantum debet explicatæ sunt, primarium chilificationis menstruum sæpe in theatro pronunciavimus."—(Baglivi, Opera Omnia, Diss. 2, circa salivam, p. 422.)

"Inutile futurum puto hic multis probare velle salivam liquorem esse abstergentem, solventem, et mirè penetrantem, cum ipsius effectus apud vulgus notissimi sint: .... massam farinaceam fermentat*.... ut meritò dici possit humanæ naturæ sapo."

...."Ita saliva ob nitro-salinam quam habet substantiam, variæ naturæ cibos incidendo, abstergendo, et penetrando digerit, ac solvit."—(Ibid., p. 426.)

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* "In vulgus notum est, Indos potus suos inebriantes ita præparare, ut vetulæ edulentulæ, grana mayz manducent, et succum cum saliva mistum exspuant in proprium vas terreum, in quo, moderato tempore excoquatur in cervisiam illis gentibus acceptissimam syrupi, illapsa per incuriam saliva, visi sunt acidi, et turbidi facti esse."—(Boerhaave, Prælec., p. 141.)

"Panis bicoctus masticatus et salivæ probè mistus aëri calido si exponatur, de novo fermentabitur."—(Nuck, Sialographia, p. 53.) Vide, Markgraav. (De Chyli, p. 28); Lery (p. 140); Vermegen (2, p. 113); Pringle (Diseases of the Army, p. 401).

"Fermentationem spirituosam farinaceorum adjuvat (saliva) hinc gentes barbaræ ex mansis radicibus Jatrophæ Manihot et Piperis methystici potum sibi parant inebriantem."—(Plenck, Hygrologia, p. 57.)

"Inter alia vero fermentationem imprimis notare licet in Potus genere, quod ex Milio grandi, Maiz dicto, Braziliani sibi parant, dum hujus grana dentibus aut gingivis paullatim atterunt horum vetulæ, eaque saliva imbnunt ac macerant, quæ deinde reliquæ massæ fermentandæ in Capulis congruis asservatæ commiscent, ut mediante hoc fermento potus acidulus atque inebrians prodeat. Simile quid observare quoque contingit in potu, quem Gujanæ Incolæ ex Cassavi radice sibi peculiarem habent, dum quosdam ejusdem taleolos a mulieribus ac pueris bene masticatos et cum saliva in pastam redactos aliis, aqua maceratis, adjiciunt atque sic mixturam hanc in fermentationem concitant."—Vide Bohn. (Disput. de Menstr. Univers. Animal., sec. 9); Weber (Anchor. Sauciator. seu de Liq. Styptic., p. 47); Henr. Meibom. (Disp. de Chylificat., sec. 60); Martin Lister (De Humoribus, cap. 12, p. 119); Ortlob. (Histor. Part. Dissert., sec. 10, p. 29).

"Chica est vinum ex Mazio, quo inebriantur Barbari. Tundunt et moliunt duabus petris Mazium admixta aqua, inde fit massa quædam. Fœmina, quæ molit, sumit per intervalla particulam et mandit, rursus abjicit in massam. Dicunt pro fermento id esse, et causam jucundæ accedinis. Postea aqua coquunt et effusa in urceos biduo acescit, gratissimus hic potus Indis, nec contemnunt Hispani. Salutaris hic potus, sicut et ipsum Mazium, renum et jecoris dolori, calculi, et urinæ retentioni."—Vide Ant. Colmener. de Ledesma (De Chocolada Inda, a Joh. Aurel Severin. ex Hispanico Idiomate in Latinum translata, p. 61).

"Imprimis salivæ usus in eo consistit, ut cibis solidioribus inter masticandum admixta eorundum dissolutionem et liquefactionem promoveat atque chilificationem inchoet."—(Gurisch., loc. cit., p. 109.)

"Ipsa quoque potulenta quæ diluendis cibis potissimum inserviunt, etsi absque masticatione deglutiantur, nihilominus tamen in ore insigniter a saliva alterantur."—(Ibid., p. 110.)

"Instar omnium laudari meretur usus salivæ decantatissimus, quem ad masticationem perficiendam præstat. Est enim primarium veluti menstruum microcosmicum, quævis assumta penetrando, emolliendo, et immutando ad digestionem præprimis adaptans; quo sive depravato sive ablato mox deficit appetitus, vitiatur masticatio et deglutitio, turbatur concoctio atque digestio."—(Hoffmann, Disput. de Saliv. ejusque morb., cap. 3, p. m. 10, et cap. 4, p. 12.)

"Chylificationis opus sequenti modo explicat J. Tackius (Chrysogon. Animal. et Mineral., p. m. 18, et seq). Accipiatur panis vel quodcunque eduli genus, sive sit caro, sive pomum, sive rapum, vel omne quod obsonii nomine venit, incidatur dentibus quam minutissime; post indatur vitro et conspergatur notabili salivæ quantitate, quæ masticato cibo sit congrua: committatur hinc vitrum, probe obturatum, calidis cineribus, ita ut cineres illud undiquaque tegant, ad eminentiam contentorum, ad horas duodecim, interdum ultra, etiam ad viginti quator, neque enim in vase artis tam cito omnia absolvi possunt; et dehiscent contenta in minima, apparebuntque hinc inde bullæ variæ sortis, exiguæ, mediæ, et majores, quæ dum bulla bullam urget instar vini novi aut cerevisiæ fermentis agitatorum, turgidam elevabunt leniter massam. Massæ huic affundatur postea liquor, succi pancreatici vicarius, vel ejus naturam redolens, ut aucta aciditate tanto felicius opus procedat, et grossum a subtili secedat. Liquor vero ille sit acetum aliquod naturæ sive philosophorum, quod nonnulli appellant spiritum saturni vegetabilis; stant tam diu, donec bullarum agitatio cesset, trajiciantur postea liquida per purum linteum ut admirandus illæ naturæ actus majori gaudio observari possit, et porro per chartaceum filtrum et liquor pertranseat clarior. Liquori huic claro et perspicuo affunde denique anaticam biliosi spiritus portionem, id est, liquorem flammis coruscum et obnoxium, auri æmulum, qualis esse solet spiritus quintæ essentiæ depuratus, et facta subito effervescentia, compositum illud migrabit in lac quoddam candidissimum, chyli purissimi æmulum. Ecce jam vobis fermentationem! ecce effervescentiam! ecce ciborum analysin, chylum, grossum, spumosum, liquidum diaphanum, lacteum!"—(Gurisch, loc. cit., p. 113-14.)

"Cibos sub masticatione (saliva) admixta solvit, diluit, in suâ principia resolvit, in pultaceum et commode deglutiendum bolum mutat. Hinc chymificationem inchoat."—(Plenck, Hygrologia, p. 58.)

"Pulmentum matris saliva impræguatum infanti tenellulo admodum prodest, atque facilius in ventriculo in chylum ætati huic et temperamento accommodatum abit, quam si alius hominis saliva humectetur."—(Waldschmeid, Institut. Med., cap. 3, p. 16.)

"La bouillie, impregnée de la salive de la mere est si bonne pour le petit enfant, qu'elle se reduit plutôt en chyle dans l'estomac de ce petit corps et s'accommode mieux à son temperament, que si elle etoit humectée par la salive d'autres personnes."—(Bellefontaine, Med. Dogmat. Physiol., Exerc. 7, p. 26.)

Bohnius (Circul. Anatom. Physiolog. Prosy. 9, 134) regarded saliva as a "universal menstruum in dissolving food."

Theod. Craan (Dissert. Phys. Med. de Hom., cap. 4, p. 11, et seq.) believed the saliva to assist the digestion of food by exciting a ferment in it.

Zypœus (Fundament. Medicin., cap. 3, art. 12, p. 106) maintained that saliva commences chylification in the mouth, and that a bolus of bread will chylify if exposed to saliva alone.

Bernh. Swalve (Querel. et Opprob. Ventricul., p. 43) was of the same opinion as Zypœus; and he further affirmed, that bread will soften and liquefy much sooner in saliva than in any other fluid.

These opinions, slightly modified, were also entertained by Lanzonus (De Saliva, cap. 3, p. 47), Martin Lister (Dissert. de Humor., cap. 12, p. 120), Jacob. de Sandris (De Sanguin. Stat., part 1, cap. 3, p. 68), Linsing (Institut. Med., p. 74), Viridetus (De Prim. Coction., part 2, cap. 7, p. 312), Zwinger (Fasicul. Dissert. Med., diss. 8, de Saliva, p. 378), Tauvry (Anat., cap. 1, p. 10). See also, Buxbaum (Catech. Med., part 1, Physiolog. Quæst. 57 seq.), Gerard

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"Barbari Brasiliæ Incolæ etiam è radicibus suæ Mandyuccæ liquorem potulentum conficiunt, quo supra modum delectantur. Has scilicet radices vetulis quibusdam edentulis tradunt, quæ ore emollitas aquam limpidam continenti exspuunt. Saliva earum pro fermento est, unde liquori oritur Zymosis, quæ eum jucundum reddit et tantarum virium, ut non alio debacchentur iste gentes, quoties mactato captivo triumphantes festum agunt."—Vide Henr. Mundius (De Aere Vital. de Pot., cap. 10, p. 344); Gurisch (loc cit., 150-1).

"Inducor, ut credam, salivam continere in se, sal nitro-salinum universali sali analogum ob eximias, ac prorsus mirabiles suas veres, quas solvendo, fundendo, abstergendo, et licet insipida videatur, potentur penetrando in fermentatione ciborum, purificatione chyli, ejusdemque in sanguinem mutatione, concoctioneque absolvit."—Baglivi (Opera Omnia, p. 428).

Blas (Institut. Med., part 1, cap. 2, p. 18), Joh. Bapt. Verloschnig (De Abus. Curat., Verno-Autumnal., cap. 5, p. 110), Joh. Jacob. Francisc. Vicar (Basis Univers. Medic., lib. 1, cap. 5, sec. 6, p. 27), Mich. Sebiz (Manual seu Specul. Medicinæ Pract., part 2, sec. 4, cap. 27, p. 518, seq.).

In the appendix to Pringle "On Diseases of the Army," is the following account of experiments performed by the author, in illustration of the digestive properties of saliva.*

"EXPERIMENT 29.—To ascertain the effects of the *saliva* in digestion, I added a small portion of it to some raw beef, and observed that this mixture, in the usual heat, putrefied slower than another which had no saliva joined to it."

"EXPERIMENT 30.—1. I took two drachms of fresh meat, the same quantity of bread, and an ounce of water, and to these added as much *saliva* as I supposed necessary for digestion. This mixture, being beaten in a mortar, was put into a close phial, and set in the furnace, where it remained about two days, with scarce any visible fermentation; but, on the third day, this action became manifest. At that time I found the bread and flesh risen in the water, a sediment nevertheless forming, and bubbles of air continually mounting; in a word, the fermentation was complete, being also distinguished by a vinous smell, as in ordinary *working* liquors. The action continued above twice as long as when no *saliva* was used; it was more moderate, and generated air with little tumult. When the fermentation entirely ceased, the mixture had a pure acid taste, though weaker than what was produced in the former experiments; and I took notice that it was without any putrid smell from the beginning.

"2. I likewise varied this experiment, as I had done the first, in using roasted meat instead of raw; and sometimes oatmeal instead of bread; but the result was still the same. One circumstance may deserve particular notice. An ounce of bread, as much roasted meat, about two ounces of water, and a small quantity of the *saliva*, being beaten together, were allowed to ferment in a heat of 65 degrees; and having examined the phial with a thermometer, I found it about three degrees warmer than the external air."

"From these last experiments it appears that if the *saliva* is sound, is in a sufficient quantity, and well mixed with the aliment, it is qualified for retarding putrefaction, preventing immoderate fermentation, flatulence, and acidity in the *primæ viæ*. But if that humour is deficient, unsound, or not well mixed with what is swallowed, that the aliment may first putrefy, then grow acid, and in that action ferment strongly, and generate much air in the stomach and bowels."

"EXPERIMENT 31.—After seeing the effects of the fresh *saliva*, both in keeping up and moderating fermentation, I wanted to know its qualities when putrid. For this purpose, having collected a sufficient quantity, I kept it about three days in the furnace,* and then added the usual proportion thereof to the common mixtures of bread, flesh, and water; which not only brought on the fermentation sooner, but made it stronger and more productive of air than would have happened without the *saliva*. The flesh became also more than usually putrid, but was at last sweetened by the acid produced by the fermentation; so that, by the time the action ceased, the contents of the phial smelled and tasted sour, without any remains of putrefaction.

"From this experiment we find it still more probable that all animal substances have a power (in proportion to their degree of corruption) of exciting a fermentation in the common *farinacea*."

"EXPERIMENT 32.—I took two drachms of a fresh mackerel skinned, with an equal quantity of bread, and having reduced them to the usual consistence with an ounce of water, I put them in the furnace, together with another phial, containing the like mixture, but with the addition of fresh *saliva;* and a third, with the same quantities of fresh beef, bread, and water, only, with which the two former were to be compared. In less than five hours after infusion, the materials in all the phials began to rise, to float in the water, and to ferment; and during the whole process I perceived no difference between the fermentation occasioned by the fish and that by the flesh, except that the phials with the fish retained the corrupted smell longest. But next day, the fermentation still subsisting, the acid smell was to be distinguished in all the phials; and on the fourth day (the corks having been drawn the night before) I was scarce sensible of any difference between the first and the third, or standard phial, either as to taste or smell; and both were very acid. But the liquor in the second phial was not so sour; and it yielded such a vinous smell as was taken notice of before, when the fresh saliva was added to the common mixture with the beef."—Exp. 30.

Spallanzani and Reaumur introduced food, previously deposited in perforated tubes, into the stomachs of different animals; they found that when the food was moistened with saliva, it digested more quickly than

* I believe these experiments were performed in the year 1750 or 1751.

* "Viz., blood-warm, or about 100 degrees of Fahr. thermometer; and the same degree of heat is to be understood as used in the rest of these experiments, unless when it is expressed otherwise."

when moistened with pure water. (Baly's Müller, vol. i., p. 576.)

Tiedemann and Gmelin acknowledge a solvent property in the saliva; but they ascribe this property to the salts contained in the secretion. (Recherch. sur la Digestion.)

Montègre is of opinion that saliva is the principal agent in digestion. (Sur la Digestion. Paris, 1824.)

Leuchs first discovered that saliva has the property of converting starch into sugar. (Kastner's Archiv., 1831.)

"Schwann has verified the statement of Leuchs, that starch is converted into sugar by the action of saliva. He digested in some acidulated saliva for twenty-four hours a certain quantity of boiled starch, then filtered the fluid, and found that iodine produced in it no change of colour. Having neutralised it, and evaporated it to dryness, he obtained from the residue, by means of alcohol, a considerable quantity of sugar, which he recognised by its taste, as well as by its property of fermenting with yeast. The part of the residue which the alcohol did not take up consisted of the salivary matter of the saliva, in part altered in its properties, and of starch changed to a substance resembling gum, which did not with iodine strike the blue colour which characterises starch." (Baly's Müller, p. 596.)

Sebastian has also confirmed the observations of Leuchs and Schwann. (Van Setten, Dissert. de Saliva.)

"Berzelius, on the other hand, observes, that saliva alone has no more action on alimentary substances, dissolves no greater part of them than pure water; and I must confess that I (Müller) have perceived scarcely any difference between the action of saliva and that of water on meat, in experiments instituted for the purpose of comparison." (Baly's Müller, p. 576.)

Dr. Beaumont makes the following observations in reference to the digestive action of saliva:—"If the materia alimentaria could be introduced into the stomach in a finely-divided state, the operations of mastication, insalivation, and deglutition, would not be necessary."

2. "The processes of *mastication*, *insalivation*, and *deglutition*, in an abstract point of view, do not in any way affect the digestion of the food; or, in other words, when food is introduced directly into the stomach in a finely-divided state, without these previous steps, it is as readily and as perfectly digested as when they have been taken."

3. "Saliva does not possess the properties of an alimentary solvent." (Exps. and Obs. on the Gastric Juice and the Physiology of Digestion, by Wm. Beaumont, M.D. Platsburgh, 1833.)

Purkinje's notions somewhat correspond with those of Beaumont. (Isis, 1838, No. 7; Baly's Müller, vol. i., p. 576.)

I shall now proceed with the detail of my own experiments.

One drachm of starch, in a finely-powdered state, was digested in four drachms of saliva, at a temperature of 98° Fahr. for twelve hours. Thirty-one grains of sugar were obtained, and the solution was strongly impregnated with lactic acid.

The residual starch was digested in three drachms of saliva, slightly alkaline, at a temperature of 68° for two days. The solution became acid as before, and eight grains of sugar were formed.

Four drachms of filtered saliva, faintly alkaline, sp. gr. 1.005, were digested upon one drachm of starch for twelve hours, at a temperature of 98°. Nineteen grains of sugar, together with lactic acid, were obtained.

Four drachms of saliva were exposed to the atmosphere for twenty-four hours. At the end of that time the secretion was alkaline: it was then digested upon one drachm of starch, and kept at a temperature of 68° for thirty-six hours. It furnished thirteen grains of sugar, and much lactic acid.

A quantity of saliva was boiled for half an hour: at the end of that time the liquid having cooled down to 98°, four drachms of it were mixed with one drachm of starch, and the mass was kept at a temperature of 98° for twenty-four hours. It became strongly impregnated with lactic acid, and afforded twenty-six grains of sugar.

Two scruples of starch, mixed with four drachms of alkaline saliva, were placed in oxygen gas over mercury, and kept at a temperature of 68° for four days. At the end of that time the mixture had absorbed its own volume of the oxygen, and had liberated half its volume of carbonic acid gas. It furnished a quantity of lactic acid, and twenty-two grains and a half of sugar.

This form of experiment was repeated, with the difference, that the mixture was kept at a temperature of 98° for twenty-four hours. Three-fourths of its volume of oxygen were absorbed, and two-thirds of its volume of carbonic acid gas were liberated. The mass was strongly acid, and furnished twenty-four grains and a quarter of sugar.

Three drachms of saliva were placed under oxygen gas for four days. It absorbed just its own volume of the gas, deposited a little albumen and mucus, but continued alkaline. It was then mixed with two scruples of starch, and kept at a temperature of 86° for twenty-four hours. At the end of that time it was strongly acid, and furnished eleven grains of sugar.

Three drachms of strongly alkaline saliva, obtained by exciting the salivary glands with Cayenne pepper, were placed under oxygen gas for six days. It absorbed one-third of its volume of the gas, continued alkaline, and deposited very little sediment. It was then mixed with two scruples of starch, and

kept at a temperature of 86° for twenty-four hours. At the expiration of that time it was feebly acid, and afforded seven grains of sugar.

Three drachms of filtered saliva, two days old, were mixed with two scruples of starch, and then placed under oxygen gas for twenty-four hours, at a temperature of 76°. The mixture absorbed its own volume of the oxygen, and replaced it by an equal proportion of carbonic acid gas. It became strongly acid, and furnished thirteen grains and a quarter of sugar.

Three drachms of filtered saliva were mixed with two scruples of starch, and placed under carbonic acid gas for twenty-four hours, at a temperature of 76°. It absorbed five-sixths of its volume of the gas, became moderately acid, and afforded eight grains and a half of sugar.

A stream of carbonic acid gas was driven through three drachms of saliva for ten minutes; afterwards, two scruples of starch were mixed with the liquid, and the mass was allowed to stand for twenty-four hours, at a temperature of 76°. It became strongly acid, and furnished eleven grains and a half of sugar.

Three drachms of alkaline saliva were mixed with two scruples of starch, and then placed under hydrogen gas for twenty-four hours, at a temperature of 76°. The mixture absorbed one-twelfth of its volume of the hydrogen, and evolved one-tenth of its volume of carbonic acid gas, became very feebly acid, and furnished three grains and a half of gummy matter, which had not a sweet taste.

A stream of hydrogen gas was driven through three drachms of saliva for half an hour; two scruples of starch were then mixed with the fluid, and the mass was allowed to stand, at a temperature of 76°, for twenty-four hours. It became feebly acid, and yielded six grains and a quarter of sugar.

Three drachms of alkaline saliva were mixed with two scruples of starch, and then placed under nitrogen gas for twenty-four hours, at a temperature of 76°. The mixture absorbed one-fifteenth of its volume of the nitrogen, and liberated one-twelfth of its volume of carbonic acid gas. It became very faintly acid, and afforded three grains and a quarter of gum.

Sixty grains of old bread were beaten to a pulp with three drachms of pure water, and the mixture was then put under atmospheric air over mercury. In twenty-four hours the volume of gas had increased one-twentieth from the liberation of carbonic acid. The mixture was not uniform; the bread lay at the bottom, and did not appear to have been altered; it furnished neither gum nor sugar, and yielded a beautiful and permanent reddish-blue with iodine.

This form of experiment was repeated with sixty grains of the same bread, and three drachms of saliva. The mixture was kept, as before, at a temperature of 86° for twenty-four hours: at the end of that time it had absorbed one-third of its volume of the oxygen of the air, and had liberated one-half of its volume of carbonic acid gas; it was strongly acid, and afforded twenty-six grains of a mixture of gum and sugar.

The same form of experiment was repeated in each instance, but the two mixtures were exposed to a temperature of 100° for four hours and a half. The saliva was of the same temperature as the other for the two first hours, after which it gained two degrees, and at the termination was three degrees higher. Numerous small bubbles were discharged from the salivary mixture, and many more were adherent to the sides of the glass; but there were none from the bread and water. The latter also was neutral, and furnished a trifling quantity of gum, but no sugar; the former was strongly acid, and yielded eight grains of gum and six and a half of sugar.

Two drachms of the saliva of mercurial ptyalism were digested upon twenty grains of starch for forty-eight hours, at a temperature of 76°. It became feebly acid, and furnished four grains and a half of sugar.

This form of experiment was repeated several times, and it was found that the diminution in the quantity of sugar produced, was directly as the deterioration of the saliva.

Two drachms of the fluid of pyrosis were mixed with a scruple of starch, and kept at a temperature of 76° for forty-eight hours. Very faint acidity prevailed, and two grains and a half of sugar were formed. This fluid contained a notable proportion of *ptyalin*, and therefore of saliva.

These experiments were severally repeated with the serum of blood, the mucus of oysters, and intestinal mucus, with acids, alkalies, and various saline solutions, but in not one instance was any sugar formed.

(To be continued.)

ON THE

UTILITY OF EARLY AND COPIOUS BLOOD-LETTING

IN SOME

CONGESTIVE & INFLAMMATORY DISEASES.

To the Editor of THE LANCET.

SIR,—Having lately met with some instances of serious diseases, the progress of which seemed to be cut short by early, and, in some cases, copious venesection, I beg leave to lay them before the readers of your excellent Journal. In this paper I have excluded such cases as are either trivial or easily curable, and adduced those only

which are rapidly fatal, or which, without leading to a fatal termination, are tedious and painful in their progress. Two are cases of apoplexy; one of acute rheumatism; one of peritonitis; one of puerperal peritonitis; and one of inflammation of the membranes of the brain. I have also excluded such cases as seemed to owe their favourable termination to the influence of any other of the means employed; and although I do not deny that some of the medicines prescribed, especially digitalis, opium, calomel, and colchicum, may have contributed to the favourable result, yet I think it will hardly be doubted that the cure in all the cases was mainly owing to the early abstraction of blood. I do not pretend that this view of treatment is a novel one; but as I have frequently had reason to regret the omission of blood-letting at the early stage of acute diseases, and as I believe that many patients are lost from this neglect, I venture to hope that my remarks on this subject will not be deemed unworthy of attention. I remain, Sir, your obedient servant,

R. H. Semple, Surgeon.

Islington, April 20, 1842.

Case I.—Apoplexy.

Elizabeth Simpkins, ætat. 70. On the 18th of March, 1842, I was sent for, and requested immediately to visit this woman, who was said to be either dying or dead. On my arrival in a few minutes I ascertained that the patient, who had previously been in the enjoyment of her usual health, and had never suffered from any dangerous disease, was walking up stairs when she suddenly fell backwards with such a noise that it was heard by the neighbours, who immediately ran to her assistance, placed her in bed, and sent for medical aid. She presented the following symptoms:—She was lying on her back with her eyes half-closed; her mouth drawn to one side, and convulsively agitated; the limbs motionless; the breathing loud and stertorous; the pupils were fixed in a state between dilatation and contraction, not altering their size by the admission or abstraction of light. She appeared quite insensible, could not answer questions, and did not seem to understand their import; the pulse was full and strong; the action of the carotid arteries powerful. I opened a vein in the arm and obtained ten ounces of blood, which may be considered a full bleeding in proportion to the advanced age of the patient. As the bowels were confined, she was ordered the following:—

℞ *Croton oil*, gtt. j;
Rhubarb, gr. iij.

The pill to be taken immediately.

℞ *Epsom salts*, ℥ss;
Infusion of senna, ℥j.

The draught to be taken every four hours.

I visited her the next day, expecting to find her either dead, or, at least, growing worse, but to my great surprise she was much better, in full possession of her faculties, and without any symptom of palsy; her speech was clear, and she possessed the full use of all her limbs. The blood drawn the day before was neither buffed nor cupped. She was ordered to continue the aperient draughts.

On the day following, March 20th, she was engaged in her usual occupations, and declared herself perfectly well. If blood-letting had been delayed, or any other measure substituted, it is most probable that a fatal effusion of blood into the brain would have followed the attack.

Case II.—Apoplexy.

John Long, ætat. 60, an inmate of the Islington Infirmary, had experienced several apoplectic attacks, the last of which occurred on the 23rd of July, 1841, for which he was bled, put upon low diet, and ordered to take croton and castor oils with saline purgatives. Under this treatment his health became materially improved, but all his solicitations for the full allowance of meat and beer were unattended to. After a continuance of this salutary regimen for five months, he contrived to procure his discharge from the infirmary, and of course received the full allowance of provisions; the consequence of which was, that on the 4th of April, 1842, he was seized with another apoplectic attack. I saw him very soon after the seizure, and found him presenting the same symptoms as those described in the case of the last patient; there was total insensibility and immobility of the limbs, pulse full and strong, pupils fixed in a state between contraction and dilatation, breathing loud and stertorous, and total deficiency of intellect. I bled him to eight ounces, and ordered the following:—

℞ *Croton oil*, gtt. j;
Rhubarb, gr. iij.

The pill to be taken immediately.

℞ *Epsom salts*, ℥ss;
Infusion of senna, ℥j.

The draught to be taken every four hours.

The next day he was much better, he had regained the use of his limbs, and his intellectual faculties were perfect. The blood drawn was neither buffed nor cupped. He was able to move both arms, but could not use the right with so much facility as the left. As the bowels were confined, he was ordered to take two drops of croton oil, and to repeat the aperient draughts.

Under this treatment he regained his usual state of health, and was in such full possession of his faculties that he furiously abused and threatened the nurse because he was not allowed the full diet of meat.

This case exhibits the necessity of early bleeding in apoplexy, and of perseverance in prohibiting the use of animal food, in order to guard against future attacks. The cure,

however, cannot be said to be perfect, for the right arm and leg are partially paralysed, and there can be little doubt that one or more effusions of blood have already taken place into the brain, which have become absorbed and replaced by serous cysts.

Case III.—Meningitis.

Mrs. R., ætat. 66, had suffered under various complaints, and was under treatment for some time in consequence of an attack of chronic bronchitis, for which she took ipecacuan wine and tincture of squills, together with saline purgatives, from which medicines she derived considerable relief. On the evening of March 25, 1842, I was requested to see her immediately, as she was said to be in a fit. On visiting her I ascertained that about eight o'clock, while conversing with a fellow-lodger, she felt suddenly very giddy, and appeared to lose the use of her arms and hands, for she let fall a candlestick which she was holding at the time. When I saw her she presented the following appearances:—She was lying in bed; she presented no distortion of the features, but her speech was thick and confused, and almost unintelligible; she appeared to have the use of both her hands and arms, and could move them without difficulty; when asked to grasp my hand, she did so, and there was no perceptible difference in the muscular power of either of her hands; the pupils were contracted, and did not dilate when the light was withdrawn; action of the carotids powerful; tongue clean; bowels moderately open; no thirst; pulse strong and full, frequently beating double; action of the heart irregular, corresponding to the pulse at the wrist; impulse stronger than natural, but no morbid sound. The intellect was in some degree impaired, but not lost; she seemed to understand the import of questions put to her, but answered in a confused and hurried manner, speaking and muttering much more than was necessary, and fidgeting about a number of things apparently of no importance. She gave many indications of cerebral excitement as she frequently moved about in the bed, and she was constantly pulling the bed-clothes with her hands. I bled her in a full stream to sixteen ounces, which did not cause her to faint.

26. Appears much better; intellect unclouded: speech clear and distinct; pupils still contracted; tongue clean; pulse 96, small and irregular; action of the heart the same as on the previous evening; mucous rhonchus heard in various parts of the chest. The blood drawn yesterday presented a disproportionate quantity of crassamentum to serum; the former was strongly buffed but not cupped. The buffy coat on the blood, which I never saw in apoplexy, pointed out the existence of inflammation of the serous membrane of the brain. She was ordered the following:—

℞ *Calomel*, gr. iij. To be taken in sugar every four hours.

℞ *Epsom salts*, ʒss;
Infusion of senna, ℥j. The draught to be taken every four hours.

27. Much the same as yesterday; has slept pretty well, and expresses herself better.

28. Continues to improve; pulse 88, irregular; has again passed a good night. To omit the powders, but continue the aperient draughts.

April 9. Expresses herself as being much better, but states that she has occasional pricking and shooting pains in the head; sleeps pretty well at night, and sits up during the day; pulse regular.

This woman now enjoys her usual state of health, and has no bad symptom whatever. There can be no doubt that in this case an early and copious bleeding cut short the progress of an insidious and often fatal disease; the calomel may have been serviceable in promoting the absorption of serous fluid, which was no doubt secreted by the inflamed membranes. The symptoms of meningitis are exceedingly obscure, and hardly any of them can be called pathognomonic; thus in some cases there is violent pain; in others, hardly any or none; in some the intellect is only impaired, in others it is wholly lost; in some the pupils are contracted, in others dilated; and in several cases, especially if there be much disease in other important organs, as in the heart and lungs, there may be no symptoms of meningitis whatever, and its existence may be only ascertained by post-mortem examination. When, however, the cerebral symptoms resemble those described in the present case, and when large bleedings are borne without inconvenience, and, above all, when the blood drawn presents a buffy coat, I think there can be little doubt that the membranes of the brain, especially the arachnoid and the pia mater, are the seats of disease.

Case IV.—Peritonitis.

Sarah C., ætat. 20, lay in of an illegitimate child two months ago, in the Islington Workhouse. A month after delivery she left the house at her own request, and went into lodgings. In her endeavours to obtain employment she was much exposed to wet and cold. The lochial discharge ceased gradually, but she has always had plenty of milk. Last week she began to feel a pain round her navel, which gradually became worse, and induced her to seek readmission into the workhouse. She was admitted March 8, 1841. The symptoms were as follow:—She complains of violent pain over the whole of the abdomen, much increased upon pressure. It is observed, however, that her face does not exhibit the marks of great agony, nor has she lost her colour. She also lies on her left side. There is no vomit-

ing, great thirst, no appetite, tongue covered with white fur; pulse 128, moderately full; bowels open. She was immediately bled to eighteen ounces, which did not cause fainting. She was ordered the following:—

℞ *Tincture of digitalis*, m. x;
Epsom salts, ℥ss;
Infusion of senna, ℥i. The draught to be taken every four hours.

℞ *Ca'omel*, gr. iij;
Opium, gr. ss. The powder to be taken in sugar every four hours.

11. Says she feels a little better, and has slept pretty well during the night; complains of cough, but does not spit; tongue furred as yesterday; bowels open; pulse 128, full. Blood drawn yesterday neither buffed nor cupped. Great tenderness over the whole abdomen, increased upon pressure. Sonorous rhonchus heard in the chest. She was again bled to sixteen ounces, which made her faint. To continue the draughts and powders.

12. The blood drawn yesterday is both buffed and cupped, though drawn in the same vessel as was employed on the first bleeding. She is now much better; has slept well; tongue moist; pain over the abdomen diminished. To continue the medicines.

14. Continues to improve; no thirst; no pain over the abdomen; gums not affected.

In a few days she was discharged cured.

In this case the favourable result is undoubtedly to be ascribed to early and copious bleeding. The quantity of calomel employed was too small to produce any very marked effect upon the system, and it will be observed that the gums were quite unaffected throughout. Whether the tincture of digitalis possesses any specific power over peritoneal inflammation, I am unable to say; but I am inclined to think that it is a valuable remedy in conjunction with venesection. It is worthy of remark that the second portion of blood drawn was both cupped and buffed, while the first was not: a fact which shows very clearly that although the buffed and cupped state of the blood may be characteristic of certain inflammations, the absence of those appearances does not prove the non-existence of a particular disease. In a case of peritonitis which I attended some years ago, the blood was neither buffed nor cupped, though, on examination after death, the abdomen was found filled with pus and flakes of coagulable lymph.

Case V.—Puerperal Peritonitis.

Mrs. R., ætat. 31, a healthy-looking woman, but who had previously suffered from attacks of inflammation, was delivered on the morning of April 8, 1842, of a still-born child, apparently a fœtus of about six months, which seemed to have been dead some time before delivery, as it was much discoloured, and the cuticle was detached in several parts. There were no unusual circumstances attending the labour, which was conducted by a medical gentleman in the vicinity. The patient had been delivered of a still-born child last August, and the fœtus was then also immature. She has been married fifteen months. She was going on favourably, with the usual discharge, till about three o'clock, p.m., of the 9th of April, twenty-eight hours after delivery, when the lochia ceased, and she was attacked with a violent pain in the lower part of her belly, attended with nausea and cold shivering. I was sent for to visit her at four, p.m., and found her in the following condition:—She was lying on her back, and complained of violent pain in the lower part of the abdomen, which extended upwards. This pain she described as being of a sharp, pricking and shooting character. The pain was much increased on pressure, especially over the uterine region, and was also increased by moving or turning to either side. Great thirst; dry and hot skin; tongue white and furred; no appetite; bowels confined since her delivery; not much headach; pulse 100, rather hard. She was ordered to take the following:—

℞ *Calomel*, ℈j;
Opium, gr. j;
Confection of roses, gr. x. To be taken immediately.

℞ *Tincture of digitalis*, m. x;
Essence of mint, m. ij;
Epsom salts, ℥ss;
Infusion of senna, ℥j. The draught to be taken every four hours.

I saw her again in three hours, and found that she had been much worse since my first visit; I therefore bled her from a large orifice to twenty-four ounces. She fainted after the bleeding, but soon recovered, and expressed herself rather better, but not quite free from pain.

10. The blood drawn yesterday was received in three vessels, two basins and a cup: it was buffed and cupped in all. She feels better this morning, and has slept two or three hours at intervals during the night. Pain in the abdomen much diminished; she can now lie on her side; pressure on the abdomen is now borne without inconvenience. Tongue still white, but moist; some thirst; bowels have been freely opened; pulse weak and regular.

℞ *Calomel*, gr. iv.;
Opium, gr. ss. The powder to be taken in sugar every four hours. To continue the draughts.

11. Much better; has slept well during the night; has perspired freely, and is quite free from pain in the abdomen; mouth sore; tongue moist; bowels open; pulse 100, weak and regular. In the afternoon of this day the pulse rose to 112, and was stronger than in the morning, but she was quite free from pain. I attributed the increase in the

velocity and force of the pulse to her having taken some warm tea just before my arrival. She was directed to continue the draughts and powders of calomel and opium, diminishing the doses of each to one-half.

12. Continues to improve, but complains of her mouth being very sore. To continue the draughts, but omit the powders, and to use the following as a wash for the mouth :—

℞ *Solution of chloride of soda,*
Simple syrup, of each, ℥ss;
Water, ℥v.

14. Complains of purging and griping, and great pain in the abdomen, which, however, is not increased on pressure.

℞ *Camphorated tincture of opium,*
Mucilage of acacia, of each, ℥j;
Mint water, ℥j. The draught to be taken every four hours.

15. Pain and griping relieved by the draughts. Her head aches and the bowels are confined. To take half an ounce of castor oil.

20. Convalescent.

The beneficial effect of copious bleeding is very manifest in this case; the administration of a scruple of calomel, with a grain of opium and ten minims of tincture of digitalis, produced no effect upon the disease; but the abstraction of blood was attended with immediate relief, and after the adoption of that measure the case proceeded without the occurrence of one unfavourable symptom. In a disease of such imminent danger, however, it would have been highly injudicious to omit the adoption of any remedial measures, and the calomel, opium, and digitalis were therefore continued, even after the disease had taken a favourable turn, in order to prevent the recurrence of inflammatory action.

Case VI.—Acute Rheumatism.

John Fox, ætat. 19, a brickmaker, married, exposed to the vicissitudes of the weather, and, like other persons in his business, addicted to drinking, was attacked a few days since with lassitude and heaviness, together with pains in various parts of his body, which he attributed to the effects of a cold. He however became gradually worse, and I saw him on the 12th of April, 1842. The symptoms were as follow:—He has pains in all parts of his body, but more especially in the right knee, which is exceedingly tender on pressure; in the left hand and wrist, which are swelled and painful, the pain being increased upon the slightest touch; in both elbow-joints, and in the shoulders. There is also some headach; pulse full and strong, 120; considerable thirst; no appetite; bowels costive. I bled him to sixteen ounces, which did not make him faint, and ordered the following:—

℞ *Calomel,* gr. v;
Jalap, gr. xv. The powder to be taken in sugar immediately.

℞ *Wine of colchicum,* ℥ss;
Carbonate of magnesia, gr. x;
Epsom salts, ℥j;
Infusion of senna, ℥j. The draught to be taken every four hours.

13. Feels a little better; the pain has quitted the left hand and fixed itself very severely in the right. Bowels open; great thirst; pulse full and strong. Blood drawn yesterday buffed and cupped, the buffy coat being very thick. I bled him again to twenty-four ounces, after which he felt very faint, but did not actually fall into a state of syncope. The draughts were ordered to be continued, and the following powder to be taken immediately:—

℞ *Calomel,* gr. x;
Opium, gr. j.

14. Much better; is quite free from pain, and now feels only a little stiffness in the limbs; can bear pressure without inconvenience; does not sleep well at night; gums not affected. Blood drawn yesterday in two vessels, buffed and cupped in both. To continue the draughts.

The next day I was informed that he was much better. He was ordered to continue the draughts, and to take fifteen grains of Dover's powder at bedtime.

16. Is so much better as to be able to walk up and down stairs, and in the street, without difficulty.

℞ *Wine of colchicum,* ℥ss;
Infusion of gentian, ℥j. The draught to be taken every four hours.

The above case affords an instance of a remarkably rapid cure of a very violent attack of acute rheumatism. As I had seen a great number of cases of the same disease last winter which were exceedingly tedious in their progress, and which seemed to defy the powers of colchicum, and to yield to the influence of calomel only after a protracted course of that medicine, and at the expense of a sore mouth, I determined in this case to try the effect of early and copious bleeding, using calomel and colchicum only as auxiliaries. It will be seen that only two doses of calomel were given, and that the gums were not at all affected. The result was most satisfactory; and although I do not pretend to say that every case of acute rheumatism would yield so readily, yet I think I am justified in believing that if blood-letting were generally employed more early and copiously in this very tedious and painful disease, much anxiety would be spared to the practitioner, and much suffering to the patient.

The above cases illustrate very clearly the impossibility of laying down any precise rules as to the quantity of blood which ought to be drawn in any particular disease, as the amount must be determined by the peculiar constitution of the patient. What may be deemed a copious bleeding in one case may be a scanty one in another, and *vice versâ*.

Thus, in Case I. the loss of ten ounces was sufficient to cure the disease: in Case II. the abstraction of eight ounces was similarly successful; while in Case III., the subject of which was advanced in years and debilitated by previous disease, the loss of sixteen ounces was borne not only without inconvenience, but with decided advantage. In Cases IV., V., and VI., the subjects of which were young and plethoric, the abstraction of twenty-four, of thirty-four, and of forty ounces, was necessary in order to produce a beneficial effect.

CASE OF

RUPTURE OF THE BLADDER.

By John S. Hiley, Esq., A.B., M.B., Elland.

William Sykes, spinner, aged 31, received a kick, blow, or fall, in an ale-house brawl on Saturday evening, March 19, 1842. According to his own account he was sobered by the accident, and walked home, a distance of a quarter of a mile: he suffered the greatest possible agony, his cries and moans being heard by many, and felt himself compelled to walk in a stooping position. At about eleven o'clock on the same night his medical attendant, Mr. Slater, was called in, who found him in a state of beastly toxication, complaining of great pain across the lower part of the belly, accompanied with a desire, but inability, to void his urine. He said he had received several kicks over the region of the bladder, and that these had been succeeded by a feeling of cold; pulse feeble; bowels moved during the day. Mr. Slater passed the catheter, and drew off about twelve ounces of bloody urine. He ordered fourteen leeches to be applied over the seat of pain; one scruple of a powder composed of calomel and jalap to be administered immediately, and a dose of cathartic mixture every three hours. At five o'clock on Sunday morning, March 20th, Mr. S. was called to him again; he had passed a restless night, and still complained of pain across the region of the bladder. He felt a desire to make water; pulse feeble; bowels had not been moved. On introducing the catheter about a cupful of urine was voided, which deposited a black sediment, evidently the colouring matter of the blood. This afforded a little relief. The cathartic powder was repeated, and the mixture continued; the part affected was to be fomented with flannels wrung out of hot water. At half-past eleven, a.m., Mr. Slater drew off about half a cupful of urine untinged with blood; his bowels had not been moved. On calling upon him at a little before three o'clock in the afternoon, he expressed himself much easier; his tongue was now becoming somewhat dry in the centre, and he was drenched in perspiration, probably in consequence of the fomenting.

At a quarter before eight o'clock in the evening of this day, I accompanied Mr. Slater to see the case, having been requested to do so previously. I found him lying on his back, and still complaining of pain and tenderness over the region of the bladder, and inability to pass his urine; no tympanitis; bowels not moved since the injury; voice good; tongue furred and moist; much thirst; skin moist; pulse soft. He felt no bad effects from any blows save those over the belly, and considered himself on the whole better than in the morning. He had now become perfectly sober and rational, though his countenance betrayed signs of considerable anxiety; he had slight frontal headach; sensations in the limbs, and other parts of his body perfect. I ordered ten more leeches, and the bleeding to be promoted by fomenting with hot water. At intervals, until our next visit, he was to have fomentations of poppy-heads and camomile flowers. An injection of gruel and salts, or gruel and castor-oil, to be administered, which was forced back without bringing away any stool. If advisable, we agreed that he should be bled in the course of the night, or in the morning. The following bolus was given:—

℞ *Calomel*, gr. v;
Jalap, gr. xv;
Powdered ginger, gr. v. M.

After the expiration of three hours from swallowing the above, he was to take a dose of senna and salts every two hours until the bowels were moved. At five o'clock in the morning of March 21st, Mr. S. was summoned to him again; he had passed a bad night, and still complained of much pain; the abdomen was tender and tumid, and tympanitic over the bladder; his knees were drawn up; countenance haggard; skin hot; tongue and bowels as before; pulse quick and wiry. One ounce of urine was obtained by means of the catheter, and he was bled to twelve ounces. At ten o'clock, a.m., we found him easier, this relief being the result of the bleeding; pulse rapid; bowels not opened. In other respects much the same, though the distress in his countenance was more evident. To have another enema, and eight or ten additional leeches; which last were to be succeeded by bran poultices, and the following pills:—

℞ *Calomel*, gr. xij;
Opium, gr. iij;
Conserve of roses, q. s. M. Make into six pills, of which let one be taken every three hours.

At eight o'clock in the evening of the 21st we found the abdomen still tender, and becoming more swollen and tympanitic; tongue much the same; no stool; pulse giving way. About one ounce of healthy urine was drawn

off; he had vomited occasionally in the course of the day. The calomel and opium to be continued, only the quantity of the latter was to be increased. An enema, containing three ounces of castor-oil, was thrown up, which was but partially retained. To have a terebinthinate enema in the course of the night; mixture discontinued.

Ten o'clock, p.m. Seen again; voice good; pulse failing, and in other respects much the same. An enema, containing six drachms of oil of turpentine, was administered. This was repeated at twelve o'clock.

Five o'clock, a.m., March 22. In the night he had made water several times in a stream; vomiting of drink and medicine frequent; pain easier; abdomen softer and less swollen. He appears to have rallied since the terebinthinate enema was given, and accordingly it was repeated.

Ten o'clock, a.m. Said he had made water, which he had felt running down his knees; evidently improved; voice good; pulse still very poor; pain much abated, and can bear the abdomen pressing; the bran poultices and bed-clothes occasion no inconvenience as heretofore. A blister was applied to the painful part. Saw him occasionally through the day, when he expressed himself better; he could turn on his side, and his spirits began to revive under the idea that he was progressing towards a recovery. In consequence of his appearing to be too much under the influence of opium, I requested that its amount should be diminished. At half-past ten o'clock in the evening the abdomen was still found less tumid and tender, the symptoms of peritonitis having declined; pulse 108, weak; thirst continues unabated; tongue furred but moist; voice good; has had no vomiting since five o'clock this morning; can move himself readily in bed. We were shown about three ounces of urine which he had voided in a bed-pan.

23. Six o'clock, a.m. Mr. Slater saw him; he had slept well in the night; considered himself better; he had discharged much flatus per rectum; pulse fluttering; wild expression of countenance; pupils somewhat contracted; perfectly sensible; much disposed to sleep, and requiring to be roused at every question which might be put to him; had made water two or three times during the night; blister poor. At half-past nine o'clock in the morning Mr. S. and myself waited upon our patient once more; he had had his bowels moved twice since last visit, and both motions were of a dark-brown colour; he feels much worse since the bowels were evacuated; pulse just distinguishable; pupils much contracted; countenance shrunk and haggard; lower jaw falls slightly; voice still good; breathing heavy; lies on his back; extremities becoming cold; appears to be sinking. Ordered mustard boots, and the following mixture:—

℞ *Turpentine*, ʒiss;
Castor-oil, ℥j;
Water, ℥iij. A tablespoonful to be taken at short intervals.

Twelve o'clock at noon. Becoming worse every moment.

℞ *Sulphuric ether*, ʒss;
Water, ℥j. A drachm to be taken when necessary. He expired at about half-past one o'clock.

Autopsy Twenty-four Hours after Death.

There were present Messrs. Jubb, Hamerton, Walton, Slater, Hiley, and myself.

The whole body was well-formed and rigid; no bruise or wound visible externally, save a slight scratch on the left temple. On turning back the integuments of the chest and abdomen, not the slightest ecchymosis could be detected.

Abdomen.—The viscera on being exposed appeared tolerably healthy, with, perhaps, the exception of the ileum, which was of a chocolate colour. There was some effusion into the cavity of the abdomen, though the liquid did not emit an urinous odour. I regret exceedingly that this fluid was not examined more minutely, for by subjecting it to a partial analysis we might have satisfied ourselves as to its urinous character. With respect to the bladder, the organ supposed to be injured, a rupture of more than an inch in length and in a semilunar direction, became manifest on its superior and somewhat posterior surface. The edges of the wound were valvular and sloped outwards, so that any water which might be in the cavity would probably operate in closing the wound. The stomach and bowels internally were quite normal, as were also the kidneys; all these parts were well-formed; liver large, but sound; gall-bladder containing a little bile, but no concretions.

Chest.—No adhesions, as might have been expected from the youth of the disease; lungs fully expanded and healthy. On their superficial surface as well as internally they appeared considerably congested, which state probably came on prior to or immediately after death; no more fluid within the pericardium than natural; the heart both internally and externally free from disease. All the valves were perfect.

Brain.—Throughout its whole extent the brain displayed all the signs of robust health.

The preceding case is remarkable for two reasons, viz., for the absence of peritonitic signs after death, and for the power of voiding urine during life. The first fact may be accounted for, however, by considering that the escape of urine, which would have caused peritonitis, may have been prevented or retarded by the valvular shape of the rupture, and by the active treatment to which the

sufferer was subjected during the four days which elapsed from the time of the accident to the period of his demise; and the last, by the peculiar nature of the injury and the form of the wound, which, by retaining the water within the bladder, would seem to have occasioned the proper action of that viscus. That some water escaped, I am not, however, prepared to deny, notwithstanding that the little which was discovered in the cavity of the abdomen did not emit an urinous odour. The most wonderful circumstance in connection with the case appears to be the length of time during which the patient lived under so severe an infliction.

Elland, near Halifax, April 4, 1842.

TREATMENT OF VARICOSE VEINS WITH THE VIENNA PASTE.

To the Editor of THE LANCET.

SIR,—In July, 1840, I had the pleasure of forwarding to you a description of a new operation, or rather of a modification of an old operation, introduced by M. Laugier, surgeon to the Hôpital Beaujon, of Paris, for the cure of varicose veins. The publication in the "Gazette Médicale de Paris," Jan. 22, 1842, of an article by M. Berard, on the cure of varices by the Vienna paste, affords me an opportunity of making a few additional remarks on this subject, which, though of but little importance in the opinion of many surgeons, still merits serious attention from all, from the frequency of the disease and the great distress attendant on it.

The cure of varices by cauterisation with the caustic potass was first attempted by Ambrose Paré, and his method has been followed, with different degrees of success, by various surgeons, up to the present time. Recommended by some, it has been objected to by others as dangerous, and by Sir B. Brodie as affording but an inadequate compensation for the pain to which the patient is subjected by the use of the caustic, and the inconvenience resulting from the tedious healing of the ulcer which remains after the separation of the slough. In May and June, 1839, M. Bonnet, of Lyons, published in the "Archives Générales de Méd.," an article in favour of the caustic potass, and gave the details of several operations in which its application had been successful. But the principal objections to its use, as recommended by Paré, Sir B. Brodie, M. Bonnet, and others, still existed. Its application, so as to make a slough of the skin and vein beneath it, was often followed by severe inflammation of the cauterised vein, resulting in most cases from inefficient cauterisation; and the extent of the ulcer, after the separation of the slough, was still a serious objection to its general application.

To obviate these, M. Laugier was induced to modify Paré's method of operating, and, before applying the caustic, to follow the directions given by Celsus, in his chapter "de varicibus:"—"Cutis superinciditur: tum patefacta vena, tenui et retuso fesramento candente modice premitur,"—substituting for the actual cautery recommended by Celsus, and for the caustic potass, a preparation known under the name of Vienna paste.

It is unnecessary for me to recapitulate all the advantages belonging to M. Laugier's plan of dividing the skin before applying the paste on the dilated vein. I would simply refer your readers to my article of July 18, 1840, and to the subsequent communications from Mr. Clay, of Manchester. (See LANCET, July 18, Aug. 29, Oct. 17, Dec. 12, 1840, and July 24, 1841.)

Of forty-four patients who entered the Hôpital Beaujon, between the months of May, 1839, and June, 1840, to be operated on by M. Laugier for varices, twenty-five were men, nineteen women. Of the latter thirteen were washerwomen, who passed from nine to ten hours a-day standing; of the twenty-five men, all, with the exception of two, were daily employed in laborious occupations, requiring either prolonged station, or constant violent exercise of the inferior extremities.

The longest duration of treatment was one hundred and seventy-four days, the shortest thirteen. The average time passed in hospital was about fifty-six days.

Mr. Clay would seem, however, to have been more successful. In the cases operated on by him the slough fell, on an average, about the fourteenth day from the operation, the wounds healing rapidly afterwards. In his letter of July, 1841, he says, speaking of females, "In young and healthy habits the sores will be quite healed in three weeks, but in those of advanced age, debilitated constitutions, and stinted means of subsistence, it will take from four to five weeks." Perhaps the difference in the time required for complete recovery between these gentlemen's cases, may depend on Mr. Clay's having dismissed his patients immediately after the healing of the wounds, whilst M. Laugier kept his patients in the hospital for several days after cure, wishing to ascertain whether the relief obtained was permanent, or whether exercise would cause a reappearance of the varices. And here I may add, that I have seen most of the forty-four cases several months, some of them eighteen months, after the operation, and in all, with very few exceptions, the cure was perfect. Respecting these exceptions, in one or two the neighbouring veins had become slightly varicose; in others, there was a tendency in the originally dilated veins to reassume their

primitive varicose state above and below the obliterated spots.

In my first communication I expressed my belief, founded on the observation of from forty to fifty cases, that the operation, if properly performed, and with the necessary precautions, was almost without danger; and, although I have since seen one case of death resulting from it, further observation has only strengthened my first opinion. I regret that accident has occasioned the loss of the notes I had taken of this fatal case, but the following are the principal features of it, which I quote from memory. The unfortunate patient was a man of vigorous constitution, having a large ulcer on the inner side of the leg, depending on a varicose state of the neighbouring veins, principally the internal saphena. M. Laugier operated on the internal saphena above and below the knee; everything went on favourably for fifteen days; the dilated veins diminished; the ulcer healed rapidly, but there was some tenderness on the separation of the sloughs. Restless of confinement, the patient, although strictly forbidden, rose from his bed several times; diffused phlebitis supervened, and notwithstanding the most vigorous treatment, terminated fatally in a few days.

It cannot be denied that death in this case resulted from the operation; but it is probable that a different result might have been obtained, if, like all the other patients operated on by M. Laugier, he had followed the directions so strictly enjoined, to remain quiet until the sloughs had separated.

"I am now," says Mr. Clay, "so perfectly convinced of the benefit of this operation, that I consider it invaluable; but it is an operation that requires not only great care in the performance, but considerable attention to the threatening symptoms of inflammatory action afterwards." In this I perfectly agree with him. By proper attention to the performance of the operation, and to the subsequent treatment, watching with care the slightest appearance of inflammation, and, above all, by strictly keeping the patient in bed till the sloughs have fallen, I have no hesitation in saying that the occurrence of phlebitis will be extremely rare, and that if it should appear, it will be more of a circumscribed than of a diffuse nature.

But to return to M. Berard's article, which, as I said before, was the principal cause of my thus troubling you. M. Berard, surgeon to the Hôpital Necker, advocates the method originally employed, but subsequently discarded by M. Laugier, of applying the Vienna paste on the skin, over the vein, following Paré's method of operating, simply substituting the paste for the caustic potass. But what is more surprising, he seems to claim for himself the merit of having been the first to apply this caustic to the cure of varicose veins, having wholly forgotten, or willingly overlooked, the various publications of M. Laugier on this subject, contained in his "Bulletin Chirurgical," 1839.

There is one point, however, on which M. Berard can with greater justice found his claim to originality. Instead of applying the paste so as to make a circular slough of the skin and vein, he places a single layer of it, from one to two inches in length, and from three to five lines in breadth; thus producing a long narrow eschar, the advantages of which, according to him, are great, for the following reasons:—First, that by thus operating he obtains a greater disorganisation of the vein than by the circular slough. Secondly, that the wound, after the separation of the slough, being long and narrow, heals more rapidly than if it were circular. And, thirdly, that the cicatrix, somewhat similar to that of an incised wound, is less evident and less liable to ulceration.

The two last reasons may, perhaps, be good, but I know not whether our obtaining such an extensive obliteration of the vein, as would result from the application of a layer of caustic from an inch to two inches in length, is desirable. Our object in operating should not be so much to produce total obliteration of the dilated vein as a partial occlusion of it. The application of a small portion of the paste, according to M. Laugier's method, is sufficient, in nearly every instance, to relieve the most severe case of varix, not only by rendering a certain portion of the vein, above and below the cauterised spot, impervious, but also, as it would seem, by restoring to the dilated vein some of its former tonicity, causing it to contract, and rendering it capable of resisting the dilating action of the blood. Besides, the separation of a slough, such as would result from M. Berard's operation, must be extremely tedious.

But it is a matter of very little importance whether we produce a circular, transverse, oblique, or perpendicular slough; our object is to obliterate a certain portion of the dilated vein, and to obtain this we should follow the most efficacious and innocent method. It is because it possesses these qualities, that M. Laugier's operation is so valuable. His substituting the Vienna paste to the other caustics is of minor importance, compared with his having reintroduced the ancient method of exposing the vein before applying the caustic. By proceeding thus, he produces a speedy and *certain* destruction of the vein; whilst, by applying the caustic on the *skin undivided*, it frequently happens, as M. Berard himself admits, that the vein is unaffected, or but partially affected by it. Hence, I apprehend, the frequency of phlebitis as a consequence of Paré's method of operating.

There are several other points on which I would wish to make a few remarks, but as

I have already lengthened my letter far beyond my original intention, I must content myself with briefly noticing the following most objectionable lines in M. Berard's article.

"After keeping the patients quiet for three or four days after the operation," says M. Berard, "we may allow them, if the eschar be dry, and no swelling exist in the course of the vein, to return to their ordinary occupations, however laborious they may be."

Comment on the above lines would be useless. The folly and temerity of thus allowing the patients not only to rise from their beds, but even to return to "their occupations, however laborious they may be," before the sloughs have separated, cannot be too severely reprobated; and if experience has not already shown M. Berard the danger of his practice, I trust that he may not have one of these days to regret not having followed the ordinary precepts of prudence. I remain, Sir, your obedient servant,

E. Scratchley, M.D.

53, Clarendon-street.

ON THE

PRINCIPLES OF TREATMENT OF PULMONARY CONSUMPTION.

By W. Wilson, M.D.,

Physician to the West London Institution for Diseases of the Chest.

In allusion to a preceding paper on Tubercular Consumption, inserted in The Lancet of February last, I wish to lay before my professional brethren a more enlarged view of the principles I advocate and the treatment I adopt in cases of phthisis. I am fully aware of the extreme difficulty that presents itself, to combat with the old and confirmed prejudices entertained by the majority of my profession and the public against the curability of consumption, and I must admit that medical records but serve to strengthen such conclusions; but an enlightened and liberal profession should be open to conviction, free to embrace facts, and earnest to solicit inquiry. We well know to what a surprising extent prejudice has blinded us to the most valuable remedies. Secale cornutum, one of the most valuable remedial agents we possess, was a popular remedy before the medical world would admit it into their vocabulary. Iodine, to a great extent, shared the same fate; and the physician who had the hardihood to recommend the internal administration of cantharides was prosecuted, and suffered the penalty of his sagacity, but taught his followers the safety and value of his practice. Doubtless a new system of treatment and new remedies should be received with due caution, but divested of all prejudice. If certain results and certain facts are stated, a fair trial of their intrinsic worth should be made, and particularly if they refer to a disease which to a melancholy extent has baffled medical skill, and defied the ingenuity of the greatest talent. I know full well that there are to be found medical men, eminent in station and talent, who, to illustrate their views, in conformity with preconceived prejudices, would present a wretched case of phthisis in which disease had made frightful progress, and in which the symptoms were strongly indicative of approaching dissolution, and ask if it were possible a cure could be effected in such a case? I should say certainly not, no more than a cure could be expected in a parallel case of peritonitis, hepatitis, fever, or in any other disease the treatment of which is well understood.

I saw a lecturer of eminence exhibit to his class a diseased lung, the structure of which was nearly destroyed by ulceration: "And am I to be told," he gravely asked, "that a visit to the South of France could have cured this patient?" He evidently had a great objection, at certain stages of phthisis, to the patient going to a warmer climate than our own.

I am well aware that many cases of tubercular consumption present such unequivocal appearances of extensive disease, that no treatment, however judicious, can be of much avail, such as acute cases, one in which there is extensive tubercular development, and in which the softening process has commenced almost simultaneously in both lungs, this is generally fatal; for if a chance were left, time is wanting to test the virtues of any mode of treatment. But to place this very fatal disease under better control, the treatment must be fixed on a more permanent basis than the vacillating and uncertain practice hitherto adopted, with the object of relief or cure; and the treatment I have pursued in this disease convinces me, by its singular success, that all hope of a cure in this prevalent and fatal complaint is not so groundless as has been hitherto imagined. I fear no inquiries by the confident recommendation of the treatment I adopt in phthisis, but should feel most happy to give my professional brethren an opportunity of judging for themselves.

From great observation I am of opinion that there is an intimate relation between scrofula and consumption, and that the same causes would produce one as the other, regulated by this difference, that scrofula is more a disease of infancy than phthisis. A medical gentleman assured me that in a foundling hospital much overcrowded with young children, the majority of them reared in the country, were on admission strong and

healthy, after being cooped together for some time in overcrowded apartments, presented very generally symptoms of scrofula, and in some instances of consumption. We have lately had an illustration of the tendency to glandular enlargements in union workhouses when overcrowded; and, indeed, this is the result in almost every instance when individuals are closely confined together, badly clothed, and badly fed, suffering under moral and physical agencies, and according to the period of life they are liable to fall martyrs to scrofula or consumption, and frequently to both conjointly. The history of a family I have known from infancy will, I think, add some weight in confirming the views I entertain. The head of this family, a country gentleman, had been afflicted with scrofula in early life, from which I learnt he was cured by a combination, containing a great many tonic bitters, amongst which was the scrofularia nodosa and menyanthes trifoliata, to a decoction of which was added a quantity of lime-water: however, the disease had long disappeared, and the cicatrices in the neck showed it to have been very extensive. He had a large family, of whom two boys and two girls were slightly scrofulous before puberty, from which they partially recovered; but the females subsequently fell victims to pulmonary consumption. The two surviving daughters married, and had families, but subsequently fell victims to phthisis, but their issue presented no symptoms of either disease. Of the male members of this family two had scrofula in the neck, of which they were cured by the use of tonic bitters, and are now in the enjoyment of good health. Another son, placed in business in the city, from misfortune and confinement, was attacked with scrofulous inflammation of the ankle-joint, from the effects of which he died, leaving a family of five children, of whom two girls have since died of pulmonary consumption, and three boys, who have hitherto presented no symptoms of either disease; the practice pursued in all the fatal cases was of a debilitating nature, and such as was calculated to lower the system. I shall give the following case in further illustration of the liability of scrofulous subjects after puberty to be attacked with phthisis, when physical or mental causes operate in combination to lower the system.

Mr. S., ætat. 22, an architect, of promising genius, had been afflicted for three years with scrofula. When I first saw him, about two years ago, I found the disease had made extensive ravages in the right side of the neck, by deep sinuous ulcerations in the course of the lymphatic glands, which extended from the angle of the jaw-bone to near the clavicle, and as far back as the trapezius muscle. Most of the ulcerations had burrowed for a considerable distance under the skin, communicating more or less with each other, and in their course a probe might be passed to the extent of three or four inches without causing pain. The discharge was of the true strumous character—thin, watery, flaky, and at times semi-purulent. The disease had also appeared in the right elbow-joint, the bursæ of which were inflamed, and had suppurated, and discharged the same kind of fluid as that of the neck. Mr. S. told me that all the members of his family were healthy, and that he considered his complaint was induced by anxiety of mind and poor diet, which his adverse circumstances did not permit him to improve. He was of a highly nervo-sanguineous temperament, with black hair and eyes, clear skin, good complexion, and full protuberant lips; which appearances, taken collectively, were indicative of a strumous habit, whether hereditary or acquired. When I was called to visit him he had just left off the use of iodine, without experiencing any beneficial result. He likewise informed me that he had tried various other remedies without advantage. I recommended him to change his dietary to one more nutritious, and also to take a decoction formed of scrofularia nodosa, anthemis nobilis, and minor; to which was added a small addition of sulphate of iron, a wine-glass of which was taken thrice daily before meals. Under this treatment his appetite gradually improved. The discharge from the ulcers, both in the neck and elbow-joint, began to diminish; and finally, within a period of fourteen months, they were completely cicatrised, without any external applications, further than dry linen or lint, to absorb the discharge. His general health for months afterwards was excellent, when he caught a fever from a lady residing in the same house as himself, and before a crisis took place a slight hacking cough set in, which harassed him for some time, and still continues to do so, but in a mitigated form, as there is no indication of an affection of the mucous membrane of the bronchi.

I am of opinion that the cough proceeds from tubercular irritation, which opinion is strengthened by the abnormal sounds given by auscultation and percussion. No trace is left of the scrofulous ulcers beyond the cicatrices. I consider that the extraordinary recovery in this case is to be principally attributed to the tonic effects of iron in combination with stomachic bitters, in improving the digestive functions, and thereby promoting a more ready assimilation of the aliment. This gentleman has kindly permitted me to introduce any member of my profession, anxious to form his own judgment on the history and treatment of this case. The results of the foregoing cases, showing the manner in which scrofula and consumption have alternated, tend in a great degree to confirm the opinion I have already expressed of the analogy existing between them, and

from the success which attended the administrationsof iron in cases of scrofula, I was induced to try the tonic effects of iron in phthisis.

William Roberts, living at 23, Brook-street, New-road, and whose case is already before the public, took it in considerable quantities; from the commencement of the treatment, and up to the present day the improvement in his health is progressive.

Case 2.—Eliza Lawless, ætat. 17, residing at 19, Queen-street, Pimlico, admitted under my care in January last, presented all the symptoms of incipient tubercles; pulse 116; animal heat 101; breathing short and hurried, on the least motion, and attended with a dry cough, which was incessant, with an occasional expectoration of frothy mucus; dulness on percussion in both clavicular regions, and considerable pain on inspiration in the left sub-clavicular region, with a want of the natural respiratory murmur. She stated that several members of her mother's family had died of consumption; as also her brother, at the age of twenty-two. Ordered to change her dietary. To have a blister on the left side of the chest. In a few days she was ordered to take a combination of sulphate of iron, sulphate of quinine, acetate of morphia, in infusion of quassia. This treatment was continued for nine weeks; and slightly altered and modified according to effects, until the expiration of this time, when she was discharged cured. Whether the beneficial effects in this case are to be attributed more to the iron than to the quinine, I am not aware; but I place more reliance on the former, where its use is not contra-indicated by much plethora.

Case 3.—Henry Chaplin, ætat. 34, residing at 34, Weymouth-street, Portland-place, came under my care on the 5th of last Dec., recommended by a medical gentleman, and was then greatly emaciated, and presented unequivocal symptoms of tubercular excavation; he had been ill four or five months previous to his admission. I ordered him a nutritious diet, and tonics containing iron; and he is now so far improved, as to think himself capable of returning to his former occupation as a groom. Whether a recurrence of the disease might again take place I cannot say, but I am inclined to believe not, as the patient is so far improved in strength, and nearly all the pectoral symptoms have subsided. He is not yet discharged from the books; and I regret that some gentlemen have referred to some of the cases I have recorded as instances of cure, when the symptoms of disease have nearly disappeared, and when the constitution has been considerably improved, when no statements of mine could warrant the conclusions they assume; but from seeing a large number of consumptive patients, I have no difficulty in making a selection for the press; if it were otherwise, it might be assumed that I considered every case of consumption coming under my care as curable, which cannot be inferred from my observations.

J. Costar, Esq., presented a most important paper to the Academy of Sciences at Paris, in which he has detailed the results of numerous experiments, in which he proves that tubercles can be produced in animals at will, by a cold damp atmosphere and low diet; and their formation prevented under similar circumstances, by the administration of the preparations of iron. He states as follows:—"During four years I subjected numerous dogs, rabbits, guinea pigs, &c., to hygienic conditions, calculated to excite in them the tubercular diathesis. Thus, some of these unhappy animals inhabited a dark cellar during several months, being inclosed in cages surrounded with damp cloths, so as to prevent exercise, the access of light, and constantly to expose them to a damp and cold atmosphere. Some of these animals were fed exclusively on from seventy-five to two hundred and fifty grammes of bread, containing, per five hundred grammes, four grammes of subcarbonate of iron.

"Without going into all the details of these protracted experiments, suffice it to say, all the animals fed in the ordinary way, became indisposed, and most of them were affected with tubercles; whilst those fed with the chalybeate bread, though by no means in good health, as may be understood from the situation they were placed in, yet all escaped tubercular deposit, or any glandular enlargement. I am so satisfied not merely of the harmlessness but of the advantages of chalybeate diet, that I do not hesitate to recommend its use to pregnant women, whose state of health seems to require it. In the course of my experiments, I tried an infinity of other substances, as baryta, lime, iodine, bromine, tannin, alum, &c., but without any success. I also obtained other results, which are not unimportant. I observed, as I had already suspected, that iron remarkably accelerated the cicatrisation and reparation of solutions of continuity of various kinds. In fact, it augments the plasticity of the blood, and thus favours the formation of granulations in wounds, ulcers, &c., especially in persons of feeble constitution. Inflammation does not contra-indicate the use of iron; for so far from augmenting inflammation, it tends to make it cease. If the contrary has been hitherto taught and believed, it has been so in consequence of prejudice, and not from a rigorous observation of facts. It results from my researches, that it is not a senseless expectation that we may be enabled to correct the hereditary or acquired diathesis, whence tubercular and scrofulous affections arise. To withdraw individuals from the influence or morbific agent is, doubtless, the first indication; but this is by no means always prac-

ticable, and therefore, in most cases, we shall be reduced to an attempt to counterbalance the influence of existing circumstances." In stating my conviction that a tonic line of treatment in consumption is superior, in a general sense, to that of any other, I am very far from recommending it as applicable indiscriminately in all cases; such a course would be inconsistent with judgment, injurious to science, and incompatible with sound physiological facts. The discretion and experience of the practitioner will enable him to select and discriminate the cases which should undergo a preparatory course of treatment before submitting them to tonics. I am disposed, for illustration, to divide consumptive cases into three classes. First, incipient phthisis; secondly, chronic phthisis; and, lastly, acute. In the two first classes, time is mostly had, to try the effects of remedial agents; in the third, the symptoms are so acute and precipitate, as to defy in general the art of medical skill. In such cases the disease is almost assuredly fatal; but Laennec and others record instances of recovery even in the last stage. I myself know of some such, but they are rare when compared with the results I have witnessed in the first and second classifications. I hold the administration of iron to claim the first rank as a tonic, in restoring the constitution to its normal state; when given in combination with stomachic vegetable infusions, containing as little tannin and gallic acid as possible, such as quassia, gentian, &c. In this combination it appears to act a most important part in the animal economy during inspiration, from its great affinity for caloric; for when the oxygen of the air combines with the carbon of the blood, there must be a large quantity of caloric set free, which in all probability unites with the iron, and thus becomes a source of animal heat. The great effect it has in cases of anemia, and in some of hysteria, in predisposing to the formation of blood, is so well known to medical men, as to require no further comment. It is alleged that if a small portion of carbonate of iron and chloride of sodium be mixed with the food of animals, they fatten enormously in an incredibly short space of time. I am of opinion that the great want of success so generally attending the treatment of consumptive patients, is rather to be attributed to a want of perseverance on the part of the practitioner, than to any insuperable obstacle in the disease itself; for should an unpleasant symptom arise during a particular course of treatment, it is generally sufficient to leave the patient to chance and palliatives, and consign him to the grave.

21, Cambridge-terrace, Hyde Park.

PENETRATING WOUND OF THE AXILLA;

LIGATURE OF THE RIGHT SUBCLAVIAN; SECONDARY HÆMORRHAGE; LIGATURE OF THE INNOMINATA; DEATH.

Nicolas Cormier, a soldier at Oran, in fighting a duel was wounded in the right axilla by a novel species of weapon—a scissors-blade tied to the end of a stick; severe hæmorrhage ensued, but was speedily arrested by handkerchiefs stuffed in the armpit; he was immediately carried to the hospital, and, as the hæmorrhage did not return when the wound was exposed, a simple dressing was applied. The following morning M. Hutin saw him, and found a vertical wound in the axilla, three or four lines in length, plugged with coagulated blood; this was not removed, and the same dressing as before was applied. For three days everything went on well, but on the fourth, blood began to escape from the wound; this was easily arrested. During the following eight days hæmorrhage returned three times, but ceased spontaneously each time on removing the dressings. On the twelfth day from the accident, the patient complained of intolerable pain in the axilla, attributed by M. Hutin to the dressings not having been changed for the last four days; on removing them, violent hæmorrhage came on; the volume of the arterial jet was equal to that of a quill: compression above the clavicle was attempted, but failed, from the position of the patient; the axilla was swollen, painful, and crepitating under pressure. As the blood ceased to escape by the external wound, the axilla became visibly more and more distended; the wound was enlarged. An assistant, by introducing his fingers, pressed upon the wound in the artery, and arrested the hæmorrhage. The subclavian artery was immediately tied above the clavicle, as it emerges from between the scaleni muscles. Whilst M. Hutin was isolating the artery, the patient complained of suffocation, and fainted. M. H. attributed this to his having touched some branch either of the par vagum or sympathetic. After the operation hæmorrhage ceased, and pulsation was no longer felt in the brachial, ulnar, or radial arteries.

With the exception of an obstinate hacking cough the patient went on well for five days; the limb retaining its natural temperature. On the 6th he rose from his bed, contrary to orders, walked round the ward, and proceeded across a court to the closet, where, during the efforts of defecation, he perceived that blood was issuing from the axilla; this was arrested by cold applications. During the night and the following day he lost more blood. On the ninth day from the operation the ligature round the subclavian came away, and the dressings over the ligatured artery

were tinged with arterial blood; at five in the evening blood escaped from the sternal end of the divided subclavian; at eight and half-past ten, recurrence of hæmorrhage, and at twelve M. Hutin tied the arteria innominata: the operation was long and painful; a flat ligature was carried round the artery with an additional ligature of reserve. The patient died at eleven the next morning. At the post-mortem examination the ligatures on the subclavian and innominata were found to have been properly applied; but, contrary to what was expected, the axillary artery was found uninjured; one of its branches, the inferior thoracic, had been completely divided, at about three lines from its origin. Thoracic and cranial viscera healthy.

*** This is but a sorry specimen of French military surgery, but such examples are luckily rare. Our object in noticing the case is, not only to furnish our readers with one of the most striking instances of the folly of applying to wounded arteries the same operation as for aneurism, but also to make a few practical remarks, which, we believe, will be found in none of our surgical works. When a large artery, whether it be the principal artery of a limb or one of its branches, is wounded, it is an established rule to tie the artery above and below the wound: two ligatures are, therefore, required; but in some cases, the above for example, instead of two, three ligatures would be requisite. A butcher (says M. Laugier, in his Bulletin Chirurgical,) cut his wrist deeply; hæmorrhage ensued: compression of the brachial artery arrested it; but circumscribed pressure on the radial above and below the wound had no effect. The wound was enlarged, and the blood was perceived escaping from an opening in the ulnar side of the radial. Two ligatures were applied; one above, the other below the opening: hæmorrhage, however, continued. It was thought for a moment that the interosseous might have been wounded, the knife having passed deeply from without inwards, but on examining carefully the superficialis volæ was seen bleeding: it had been divided immediately at its origin, on a level with the radial. A ligature was passed around it, and hæmorrhage ceased.

Let us now examine what would have occurred in M. Hutin's case, if, as he should have done, he had enlarged the wound, and attempted to tie both ends of the bleeding artery. The inferior thoracic had been divided close to its origin from the axillary, leaving scarcely sufficient length for the ligature of its upper orifice; it would, therefore, have been requisite to have placed a ligature round the axillary, above and below the origin of the thoracic, and, in addition, a third ligature round the inferior orifice of the divided thoracic, from the numerous anastomoses between it, the internal mammary and superior intercostal arteries.

It may be objected that the third ligature could be advantageously replaced by compression. This might be true in M. Laugier's case, where pressure on the superficialis volæ, as it passes over the carpus, could be easily effected; but it would have been wholly inapplicable to M. Hutin's case from the depth of the axilla, and from the impossibility of applying compression methodically. We have thrown out these few remarks, as similar cases may occur, and prove extremely troublesome and puzzling.—*Archives Chirurg., Francaise et Etrang.*

AMPUTATION AT THE SHOULDER.

EXTIRPATION OF THE SCAPULA AND PORTION OF THE CLAVICLE—EXTIRPATION OF THE TESTICLE IN THE SAME INDIVIDUAL.

The following case is most interesting from the complicated nature of the injuries and the serious operations required. A boy, fourteen years old, employed at the cannon foundry at Cairo, was wounded in several places from the accidental explosion of a cannon loaded with stones, bricks, and similar substances. At the moment of explosion he was stooping, with his back to the cannon, and his legs widely separated, raising a water-jar from the ground. Some of the projectiles struck him on the left lumbar region, others passed between his thighs, lacerating the left scrotum, and dividing the left spermatic cord; but the majority of them struck the left shoulder, causing extensive laceration and fracture. The divided spermatic artery was tied, and the testicle, together with several small pieces of brick, was removed, and the contused and lacerated integuments being cut away, the edges of the wound were brought together. The neck of the humerus was literally smashed, and the surrounding integuments and muscles dreadfully torn and contused, leaving at the inside of the arm a small portion of skin, scarcely sufficient for a flap, uninjured. Amputation at the shoulder-joint was performed, but on examining afterwards the scapula, it was also found to have been shattered in several places. This, together with the insufficiency of the flap, determined Gaetani-Bey on prolonging his incisions, and removing the whole of the scapula, together with

the acromial end of the clavicle. The lacerated integuments were fashioned so as to form a covering to this extensive wound, and twenty-four days from the operation the lad had completely recovered.—*Archives Chirurg., Francaise et Etrang.*

*** We find recorded in the "Annals of Military Surgery" several instances of partial removal of the scapula with the arm for gun-shot injuries. Cheselden, Carmichael, Dorsey, and others have mentioned cases of violent separation of the scapula by machinery; but we believe that, in addition to the above, there is only one case of total ablation of the scapula and arm, as a surgical operation, contained in our surgical records. This was the case of a man on whom Mr. Cuming, in 1808, removed the scapula and arm for a gun-shot wound.

SPINAL DISTORTIONS.

DIVISION OF THE MUSCLES OF THE BACK.

In an article in the "Gazette Médicale," M. Guerin endeavours to refute the objections raised by M. Bouvier against his theory of the dependancy of spinal distortions on muscular contraction, and the applicability of tenotomy to their cure. For the present we will simply notice M. Guerin's theory, reserving to some future number a summary of the different theories on this class of affections. According to M. Guerin spinal distortions should be classed with club-foot, wry-neck, &c., and that as the muscles of the foot, leg, knee, &c., by their contractions produce certain deformities, which, arising from the same cause, perverted muscular action, present the same general character, and require for their relief the same operation, division of the contracted muscles; so also curvature of the spine may be considered as the club-foot of the back, depending on the contracted state of the muscles of this region, and requiring for its cure their division.

EMETICS IN CONFIRMED CROUP.

M. Marotte, in a long article in the "Gazette Médicale," enforces the necessity of repeated and large doses of emetics, aided by local depletion, mild purgatives, and blisters, in decided cases of croup. Dr. Marotte agrees with Dr. Delaroque on the necessity of acting vigorously within the first two hours from the accession of the disease: thus, he commences by applying leeches, and whilst the patient is in a state bordering on syncope, he gives large doses of emetics, being indifferent as to the particular emetic administered, and follows them up with a blister, all within an hour or an hour and a half. If the first administration of emetics only produces temporary relief, they are to be repeated every three, four, or five hours, until a decided benefit is obtained.

EFFECTS OF A DIET OF FRUITS AND SACCHARINE FOOD.

To the Editor of The Lancet.

Sir,—I send you the following account of an extraordinary cure produced by the use of *ripe fruits*, with the hope that some of your correspondents will be able to give a satisfactory explanation of the *principle* upon which the effects were produced. I am, Sir, yours, &c.

S. Rowbotham.

Stockport, April 19, 1842.

In September last (1841) I met with a Mr. Fielding who resides in John-street, Stockport, Cheshire, and he named to me the case of his child, which had then been ill eighteen months; he asserted that such a case was never heard of before, and desired me to see it. I accordingly went to his residence. On entering the house the stench was almost intolerable: this I was told had existed for some time. The child was a boy three years old. It was covered from head to foot with ulcers. Its eyes, nose, ears, and mouth, and, in fact, its whole head and face, were involved in one complete mass of fœtid running sores or ulcers. The lower parts of its body were the same; the anus and genitals were scarcely distinguishable, and almost black; it voided urine from five or six places; and so great were its sufferings in going to stool, that it was afraid to do so until the fæces involuntarily dropped from it, when it always cried in the most pitiful manner. Its little thighs seemed to be nearly separating from its body; and for more than twelve months it had never been able to sit down even upon a pillow, but always stood upon its feet, and leaned with its elbows upon the nurse, excepting at times when it was able to kneel upon a pillow. It had scarcely been able to lie in bed for the same period, in consequence of the whole of the surface of its head and face having run into one mass of ulceration; it had been perfectly blind for nearly twelve months. During the whole of this period it was never left alone for a moment, either night or day; its belly was exceedingly enlarged and very hard. Eight of the most eminent medical men had given it up as incurable. Some of them declared that no known mortal power could even *improve* its condition; but to think of a *cure* was madness. All who saw it agreed that

it was out of the power of any human being to do it good; and any one who offered such a thing with the view of being paid for it, could be very little less than an impostor.

From certain views which I held upon the origin of disease, but which I need not state here, I was induced to recommend a diet consisting almost entirely of ripe fruits and honey, or sugar and treacle. The parents and friends of the child had long lost all hope of a cure; but could, of course, see no harm in this. We accordingly commenced the new diet on the 13th September last. In the morning it was supplied with some stewed fruits, mixed with sugar or honey, to its breakfast. The same to dinner, tea, and supper. It was allowed, and sometimes forced to be eating grapes, cherries, plums, apples, pears, and such other fruits as could be obtained, all the day through. A *little* other and ordinary food was *now and then* allowed; for, previous to this change in its diet, it had almost lived entirely upon wheaten bread and butter, and bread made into porridge with milk. The appetite was so voracious that it was never satisfied; and the child would eat until its throat and mouth were crammed so full, that many times they were obliged to force out the food to prevent its being choked. On the 16th of the same month we thought the sores upon its back and neck were beginning to disappear. On the 23rd it was very sensibly improved. On the 30th one-half of its face was clear; its stools were made with ease; the urine was easily and freely discharged; it could sit in a chair, and lie comfortably in bed; and the lower parts of its body were much better.

In this way it went on daily improving, until at last its eyes opened, but they were very weak at first, and it could scarcely see anything; its sight, however, gradually improved. Before the new year came in, not a single ulcer remained upon its body; the skin became remarkably clear and fair; and the features, which for more than twelve months had been in such a state that it was impossible to do more than guess at the position of its nose and eyes, were restored to their wonted appearance. The father of the child at this time, when its eyes were yet exceedingly tender, in his anxiety to make known the result of the experiment, incautiously took it out without anything over its eyes; it thus took cold, and they closed up again for a few weeks; after which they again opened, and continued to strengthen and improve.

Thus by the simple and even pleasant process of living for a time upon ripe fruits and saccharine matter,—as honey, sugar, and treacle, was a human being snatched from the grave, and from a state which, perhaps, no mortal was ever in before, and restored to health and life.

UNIVERSITY COLLEGE HOSPITAL.

INJURY TO THE CARTILAGES OF THE RIBS—REMOVAL OF A PORTION OF THEM, AND CURE.

M. L., aged twenty-eight, was admitted February 21, under the care of Mr. Liston. On the night of the 20th he took sixpennyworth of laudanum for the purpose of self-destruction, but finding no effect from it he took a dinner knife, sharpened the point as well as he could on the hearth-stone, put it to his left side, rested the handle on the bed, and fell upon it. Says he tried to pass the knife between the ribs, but could not. There was some bleeding at first, but it soon ceased, and he tried several times to renew the bleeding, by passing the knife into the wound, and moving it about. He was brought into the hospital at three, p.m.

He is a tall, powerful man, good conformation, sanguine temperament, light complexion, and red hair. Has a wound three-quarters of an inch in length in the left side of the ensiform cartilage, not far from the attachment of the diaphragm. The bleeding had ceased; the wound was dressed with water-dressing. Ordered to have a purgative pill, followed by a dose of castor-oil.

Feb. 22. Medicine has not operated; pulse 96, full, and rather inclined to be hard; breathes somewhat quicker than natural; great thirst; tongue covered with a white fur; wound painful, increased by coughing or lying upon his right side; mind much agitated; bowels open at four, p.m.

23. Pulse 104, soft and compressible; complains of pain in the wound on inspiration; less fever.

24. Improving; the wound has begun to suppurate.

26. Attacked in the night with violent pain in the side and dyspnœa; bled to forty ounces with considerable relief.

28. Health much improved; the wound discharges a dark-coloured matter, supposed to be the breaking up of a large coagulum. Made an out-patient on the 7th of March.

March 12. Returned to the hospital to-day, complaining that the wound of the side discharged a great deal on walking: walking and other exertion very much affected his breath, and caused a pain in his side, rather lower than the situation of the opening. Dressed with water-dressing, and a broad bandage to be applied round the chest.

14. Discharge continues very profuse; pressure on the parietes of the chest produces no increase of the discharge, though it may be distinctly seen to ooze out of the wound during a forced inspiration; his health remains good; tongue clean.

16. Mr. Liston passed a probe to the depth of at least two inches into the wound. A collection of matter is supposed to exist

somewhere about the attachment of the diaphragm to the cartilages of the last true ribs. Ordered opening medicine.

18. Mr. Liston made a T-shaped incision, passing through the original wound, and on dissecting back the flaps a small opening was seen passing through the cartilages of the ribs where they are united together, to the left of the ensiform cartilage, through which the matter was seen to proceed. A circular portion of two cartilages, nearly the size of a shilling, was removed with a strong blunt-pointed bistoury, half an inch of the point being broken off, and a large quantity of healthy-looking matter gushed out. The bleeding was restrained by lint dipped in cold water, and the wound afterwards dressed with water-dressing.

19. No unfavourable symptoms; the wound discharges freely.

20. Complains of pain on inspiration and uneasiness around the wound. Ordered three grains of calomel and one of opium every three hours.

22. Pain relieved; slight cough; bowels open.

25. Pain entirely gone, the wound contracting and granulating very nicely; health good; appetite voracious; tongue clean. Allowed to walk out every day.

30. Still improving in every respect.

April 8. Discharged cured.

MIDDLESEX HOSPITAL.

IMPERFORATE HYMEN, WITH CLINICAL REMARKS BY MR. ARNOTT.

March 31, 1842. In his clinical lecture to-day, Mr. Arnott remarked that, under the head of imperforate hymen, several morbid affections of the female organs of generation are not unfrequently confounded, simply because in all of them the vagina, or passage to the womb, is obstructed. There are cases of true imperforate hymen,—of actual defects or closure of the vagina,—of adhesion of the labia minora covering the entrance to that passage. This last is of frequent occurrence in children, and many are brought to the hospital by their mothers in a state of great anxiety as to their condition; the adhesion seems at first extremely firm and intimate, but by gentle traction and the use of a probe it is readily separated, without abrasion of surface or bleeding; it is merely a gluing together of the adherent surfaces.

This closure of the vagina, or rather the absence of it to a greater or less extent, and which is sometimes improperly described under the name of imperforate hymen, is an original malformation, and a much more serious affection than the latter, from the difficulty of maintaining the new opening or rather passage when made by the surgeon, when this to a certain extent exists naturally, from the risk of failure in making a new passage when this is entirely absent, and from the more frequent occurrence of peritonitis after operations for closed vagina and a fatal termination thereof.

From what is stated in books, you would be led to imagine that instances of imperforate hymen are of frequent occurrence. They certainly are not so. Many practitioners have never met with a case; even those who have had extensive experience, and few have seen beyond three or four. This is the only case which has occurred in the hospital for a number of years. I will then relate the circumstances attending that of Mary Ann Dick, who was admitted last week suffering under this affection, and precisely as they occurred, as many of you had not the opportunity of witnessing the proceedings arising out of it.

On the morning of March 24th, the day on which this girl of seventeen and three-quarters years of age was admitted, I received a note from a medical friend, requesting me to get immediate admission into the hospital for a young woman, the sister of a servant of his, whom he understood to be in great danger, and who was labouring, as he was informed (for he had not seen her), under retention of urine. I gave the order, and found she had been admitted when I came here at the usual hour. It appeared that the girl had enjoyed tolerably good health, with the exception of headachs, for about a year and a half; occurring sometimes monthly, at others more frequently. She had never suffered from pains in the back, loins, or belly, until a week ago. On Friday, the 18th, she was unable to make water, and this continued till Monday, the 21st, when a surgeon was called in, who drew it off, and had done so twice a-day, till she was admitted here on the 24th. From the morning of the 23rd she had had most severe pain in the belly, and was unable to keep one moment quiet. I found her in great pain, with a distended and tense abdomen, tender on pressure. In examining this a tumour was detected in the umbilical region, and extending above it, solid, and somewhat movable, and of the size of an orange. At first it gave the impression, from its seemingly isolated character, that it might be a collection of indurated feculent matter; but this idea was no sooner suggested than dispelled, by the consideration that it was not in the ordinary situation of the large intestine. It then struck me, from its somewhat triangular shape, being larger above than below, that it was uterus; and I asked the girl if she had been unwell lately: to which her reply was, "I have never been so, Sir." I at once put my finger between the labia in the direction of the entrance of the vagina, when its progress was stopped by a bulging, smooth swelling there, and the nature of the case was made evident. I now made an ocular inspection, and found the imperforate hymen distended and protruding,

in size and form like that of half a hen's egg divided longitudinally, and placed lengthways between the entrance of the urethra in front and the perineum behind. The membrane so distended and stretched was red, smooth, and fleshy, and the swelling firm, but elastic to the touch. It was opened first transversely, and then vertically; and as soon as the bistoury penetrated, the retained menstrual fluid spouted forth in a stream, and continued to flow freely till thirty-six ounces had escaped. A draw-sheet had been placed under her, and into this the rest was now allowed to escape, for I was unwilling to apply pressure to the abdomen, and thereby increase the danger; which in these cases is alleged to depend on the entrance of air into the vagina, and the consequent decomposition and putrefaction of the fluid which is still retained, which in this case becomes a source of great irritation. For this reason, also, the patient was desired to be kept perfectly quiet, and as clean as possible.

In the evening the girl was found free from pain; the draw-sheet had been changed twice, and she now had the third under her. The nurse represented, and the appearance seemed to justify her calculation, that from fourteen to sixteen ounces of fluid had come away in the sheets. The patient had shivered soon after I left, but she was wet; and on being made more comfortable this ceased, and had not recurred.

On the following day, the 25th, she had slept all night, and was free from pain. Made water last night freely, and again this morning. Discharge was small from the vagina.

Nine, p.m. Occasional and recurring pains in the belly; bowels have been opened but scantily; pulse natural in frequency; countenance good; belly feels full, and there is some pain on pressure at the lower part. To have a compound senna draught directly, and the abdomen to be fomented by means of hot flannels soaked in turpentine.

26. Bowels have acted several times; is quite free from pain; belly not tender.

27. Quite easy. The discharge from the vagina has ceased. Here is some of the fluid which was evacuated; it is of the same colour and consistence as when discharged; the colour approaches closely to that of the electuary of sesquioxide of iron and treacle, and the consistence that of thin treacle. You are aware that this secretion will preserve its fluid state in a covered bottle for years.

Where were these fifty ounces of fluid contained? In the distended and lengthened vagina; and it was from its increased length that the uterus was forced up to and above the umbilicus. I am doubtful if any of the fluid was contained in this organ itself.

This patient had subsequently not a bad symptom. On examination a fortnight after her admission, the opening was found almost closed. It was reopened, and a bougie was afterwards occasionally passed. She was kept in the house for a fortnight longer, in the expectation that menstruation might occur; but as it did not, and the girl was perfectly well, she was discharged, and now attends as an out-patient.

On the Treatment of Stone in the Bladder by Medical and Mechanical Means. By R. Willis, M.D. Baillière. 1842. 8vo. Pp. 183.

The first impression that occurs to the mind on taking up a volume devoted to the consideration of the treatment of stone in the bladder, resolves itself into the question, What can possibly be said upon this subject that has not hitherto been oft-time told? or What can be written with regard to a disease for which lithotomy is the only established cure? or, perchance, What vain and transient theory is now to be unfolded before the profession to wither in its turn, and to be rejected with the useless mass which has preceded it? Such, we say it, may reasonably be the foremost impressions on the mind of the reader on first glancing at the title-page of this volume; but if he have courage to open its pages and peruse them, he will rise from his occupation much gratified, much instructed, and agreeably disappointed in his unfavourable anticipations. This is, we hesitate not to say it, a truly valuable work, and is calculated to confer prodigious benefit upon those who have the misfortune to suffer from the distressing complaint concerning which it is written. Lithotomy is brought under the object glass of strict examination; lithotrity is carefully and ably analysed; the chemical projects for the solution of stone in the bladder are justly weighed; while all are thrown far, far into the shade by the enunciation of a method of treatment that is painless, almost bloodless, and unerring in its results, correct in principle, and simple in application. This operation is one of those important inventions for which medicine is indebted to the genius of Dr. Neil Arnott,—the application of the dilating force of fluid-pressure to the prostatic urethra and neck of the bladder for the removal of calculus. Before, however, proceeding to the consideration of this operation, let us take a brief review of the subjects treated in the volume. These may be best laid before our readers in the following paragraphs, which comprehend the subjects of the five chapters into which the work is divided; a few pages at the con-

clusion of the volume being devoted to the consideration of the Vichy waters, the solvency of calculi, some observations on the size of calculi in relation to the success of the operation, and Cheselden's operation. The five grand topics under consideration relate to the means by which a stone in the bladder has hitherto been sought to be removed; they are,

"1. By effecting its solution; and this has been attempted in two ways: *a*, By the agency of medicines administered by the mouth; *b*, By chemical agents thrown into the bladder.

"2. By removing it through the urethra entire; and this plan has been essayed in two ways: *a*, With previous dilatation of the urethra; *b*, Without previous dilatation or preparation.

"3. By grinding or breaking it down in the bladder, and removing it piecemeal through the urethra (lithotrity).

"4. By removing it through an incision practised about the neck or fundus of the bladder; the parts which oppose the exit of the stone being dilated when it is small or of moderate size, and torn when it is large (lithotomy).

"5. By removing it without tearing or violence, through an incision into the urethra in the perineum, and slow dilatation of the membranous and prostatic portions of that canal, and of the neck of the bladder (lithectasy, cystectasy).

The three first chapters have already been before the profession in the "British and Foreign Medical Review," we, therefore, pass them over with the simple observation, that Dr. Willis has satisfactorily shown that the improvements in the treatment of the stone originated in England, where numerous physicians and surgeons have been engaged upon the subject for a succession of years. Among these improvements, the suggestions of Dr. Neil Arnott stands forth in bold relief, and form the basis of most of the modern additions made to lithotrity since the time of the well-known imitator of Arnott, M. Ducamp.

With regard to the value of lithotrity as an operation for the cure of stone in the bladder, Dr. Willis remarks,—

"The value of lithotrity as a general means of treating stone in the bladder has been immensely overrated, and its indiscriminate application to all kinds of cases has cost many valuable lives. To such an extent, indeed, has this already occurred, that it might be made a question whether M. Civiale's first successes ought not rather to be made subject of regret than of rejoicing, for successes in desperate operations are known to do vast mischief in the end,—one is saved, ten perish prematurely in consequence. But lithotrity *assumed as a general operation* is unquestionably a desperate one; the statistics of the plan prove as much."

Of these statistics, M. Civiale remarks, that of 506 cases which presented themselves to him up to the year 1836, 199 were unfit subjects; and of the remaining 307 favourable subjects, 296 were cured; 7 died; 3 partially relieved; 1 issue unknown. But M. Civiale's private version is seriously at variance with public documents relating to the same cases. Thus it appears by a report presented to the Academy in 1831, by Barons Larrey and Boyer, of cases confided to the care of M. Civiale in the Hôpital Necker, that of 24 patients, 6 had been cut after lithotrity had failed, and 11 died more or less immediately after the operation. In the second report from the same hospital during the years 1831 and 1832, it is stated that of 53 patients, 27 were cured, and 15 died; the rest remaining unrelieved. M. Velpeau also reports a somewhat different estimate of success in cases under the care of M. Civiale, than the latter gentleman himself has given. Thus he shows that of 206 cases, 108 were successful, while 98 were unsuccessful. The following summary of twelve cases in the hands of M. Velpeau affords a good illustration of the ordinary effects of lithotrity:—

"In the 1st case, lithotrity had to be abandoned on account of the sufferings of the patient, who remained unrelieved; in the 2nd case the patient was cured; in the 3rd he died; in the 4th lithotrity had to be relinquished, after which lithotomy was performed; in the 5th, the operation of lithotrity was also found impracticable, and lithotomy was had recourse to; in the 6th, the patient was cured; in the 7th, he was also cured; in the 8th, he died; in the 9th, he was cured; in the 10th, he died; in the 11th, he was cured; in the 12th, lithotrity had to be given up, and lithotomy substituted."

From these statements which are undeniable, and from an abundance of facts and cases collected both here and in France, published in this volume, we are bound to acknowledge the conclusions drawn by Dr. Willis to be founded in truth, namely, that

"Lithotrity is admissible, and only admissible, in cases in which the bladder is perfectly healthy, and in which the stone is small,—of the size of a filbert, a shelled

almond, or it may be a nutmeg at the utmost; under all other circumstances it ought to be held impracticable. In other words, lithotrity is admissible where it is estimated that the stone can at one sitting be seized and reduced to fragments of sufficient minuteness to be passed by the urethra. No second, certainly no third operation ought ever to be contemplated. *If the patient who has had lithotrity performed upon him is not relieved at once, he is in imminent danger of losing his life.*

"Lithotrity, I do not hesitate to say it, has now been fairly tried, and found wanting as a general means of relief for stone. Restricted to the circumstances just indicated, it is a great addition to our chirurgical therapeia; applied indiscriminately, and as a substitute for lithotomy and all other means of dealing with stone in the bladder, it is a most fatal present made to humanity.

"This conclusion I know will present itself unexpectedly to many; the general belief is, that lithotrity is a trifle; that the risk and the pain which accompany it are no more than attend the extraction of a tooth. Let no man deceive himself on these points; I have raised the veil sufficiently to show indiscriminate lithotrity, in the nature of things, a most formidable operation; I have shown it in its practice a most fatal one; and then as to the pain—the most violent fit of stone may be as nothing in comparison with the pain of lithotrity. The first operation is often at least as painful as lithotomy. Sometimes it is not so,—it never ought to be so,—but indiscriminately applied, it often is at least as painful as lithotomy. But if the sittings have to be repeated three, four, five, or six times,—and as many as a dozen and more are sometimes necessary,—each becomes ever more painful than the last, till the business is literally one of torture. M. Souberbielle has performed lithotomy on more than thirty subjects, who had had lithotrity essayed, and every one averred that he suffered less from the former than from a single sitting of the latter operation."

After adducing much important and valuable information relative to the statistics of lithotomy, the author observes, in connection with the published summaries of an eminent London surgeon,—

"Mr. Liston's success, I conceive, ought to be great, and we find it so in fact. Probably no man ever operated with more fortunate issues in adult and aged cases than this surgeon. To lose but 1 in 17 between the ages of 20 and 40 is indeed a triumph; and though the mortality between 40 and 60 and between 60 and 80 be formidable enough, still the ratios of 1 in $6\frac{2}{3}$ and of 1 in $5\frac{6}{7}$ is greatly more favourable than we have been accustomed to see it in the tables of continental surgeons, where it is 1 in 3, 1 in 2, and sometimes even more than 1 in 2. The mean mortality of the whole of Mr. Liston's operations on the male is 1 in $7\frac{1}{2}$ very nearly, a result that accords very closely with that in the Norwich tables; but it is a result obtained with this difference, that whilst at the Norwich Hospital considerably more than one-half of all the subjects of operation were children and youthful subjects, in Mr. Liston's series of cases, 86, or about three-fourths of the entire number, were adult and aged males."

In adverting to the relation of age to the success of lithotomy, it is remarked that previously to puberty,

"It would seem generally to be of little moment who was the surgeon, and what the operation: if the majority of subjects be youthful, the success will be considerable,—the mortality may be no more than 1 in 20 or 25; if, on the contrary, the majority of the patients be adult and aged, the mortality will certainly be from 1 in 5 to 1 in 2, according to the period of life."

In his remarks introductory to the operation of lithectasy, the extraction of the stone by gradual dilatation, Dr. Willis makes the following judicious observation:—

"The success in lithotomy, we have seen, is not so great under any circumstances, certainly not in those where success is most truly desirable, as should induce men of humanity to rest satisfied with its results; a mortality of one in three, and one in four, is a frightful mortality; and after forty, when the life of man is most truly precious, when he is the husband and the father and the mainspring in the varied business of the world, the mortality is certainly not less; were the success nineteen in twenty, it would still be worth while in my opinion to strive to make it twenty in twenty-one."

The principle of Dr. Arnott's operation we have already detailed in a preceding volume (vol. ii., 1840-41, p. 628,) of THE LANCET. It will suffice here to quote the concluding remarks of Dr. Willis, with which we entirely concur.

"There is hardly a case to which it is not applicable, and its application is without danger immediate or prospective. The brief interval of from four-and-twenty to eight-and-forty hours, is all that is necessary to begin and end the operation;—and this, with no doubtful prospect, it cannot end otherwise than well. Even if we found a stone of five or six ounces in weight, we should feel neither embarrassment nor alarm; we never should think of extracting such a mass entire, indeed, but we have an aperture of two or if we choose of three inches in diameter, and a canal of little or no greater length, through which we can introduce an Earle's or any

other commodious instrument for breaking up large stones in the bladder, and reduce it to fragments in a twinkling. We might even have a professor of lithotrity in waiting, and give him an opportunity of proving the strength of his instruments in circumstances where a break or a bend would prove of little consequence to the patient, and where no fragments,—not of the stone only but of the instrument,—need be left behind to form the kernels of other calculi, or to task his ingenuity to invent additional implements for their extraction."

The few quotations which our limits enable us to offer will, we think, awaken a desire to peruse the volume from which they are taken, and we assure our readers that they will be much gratified and much instructed by the task.

REPORT
ON THE
MEDICAL ARRANGEMENTS
UNDER
THE POOR-LAW.

SPECIAL REPORT *of the* COMMITTEE *appointed by the* PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION "*to watch the further Progress of the Question of Poor-law Medical Relief, and to suggest to the Council from time to time such Measures as may appear to them necessary to meet Circumstances as they arise.*"—Dated the 30th of April, 1842.

YOUR committee, at the request of the central council, have perused and carefully considered the *general medical regulations* and the *explanatory circular* to the boards of guardians, recently issued by the poor-law commissioners, and recommended to the medical profession by the president of the Royal College of Surgeons.

In submitting to the council the result of their examination of these documents, your committee would express their satisfaction at perceiving that the strenuous efforts of the medical associations to obtain an amended administration of medical relief for the poor, efforts persevered in, under any discouraging circumstances, have at length proved not altogether fruitless.

These exertions may have been censured by some as factious, and by others considered unnecessary or useless; but the beneficial results at present only partially manifest will silence numerous objectors, and should encourage the association to a judicious continuance of well-directed endeavours to secure a complete and decisive reformation of the system.

The several improvements directed by the poor-law commissioners are arranged in the following order:—

First. "Tenders for medical attendance" (articles 1 and 2).

Your committee congratulate the association and the profession at large on the abolition of that most obnoxious form of "tender" in which the medical candidate names the sum for which he is ready to undertake the office. It is, however, a matter for unqualified regret that the commissioners still leave the guardians at liberty to fix the price of medical duties without reference to any fixed scale or acknowledged principle of computation.

Secondly. The qualification of medical officers (articles 3, 4, and 5).

Your committee observe that qualifications in both medicine and surgery will for the future be required of candidates for union appointments. The profession have long contended for the adoption of a similar measure, but the value of the present regulation is much impaired by its exclusiveness, and its obvious tendency to confer an undue advantage on the London College of Surgeons.

Your committee, however, feel the less anxiety on this point, as it appears more than probable that the measure of medical reform promised by Government will satisfactorily adjust the qualification of all medical men in public employment, and thus in effect set aside the commissioners' propositions.

Thirdly. The regulations relative to the maximum area and population of medical districts (articles 6, 7, 8, and 9,) are in their present state open to objection; yet their introduction confirms the correctness of the assertion so repeatedly made by your committee, and more than once denied by the commissioners,* that *it is both possible and expedient to establish, by direct enactment*, maximum limits to the population, if not to the area of medical districts.

The limiting of population to 15,000 in large towns is a decided improvement upon existing arrangements, but throughout the country, and in the great majority of unions, this limit will be attended but with little advantage.

Again, the limiting of area to 15,000 acres will by no means adequately reduce the extent of districts in populous localities, whilst it will be found impracticable, not only in Wales, where the commissioners do not propose to enforce the rule, but also in several English unions, where the population is widely scattered.

Your committee have founded all their recommendations on this principle, that in proportion as the population of the locality is more scattered, so the number of inhabitants included in a medical district should be less. Such a proposition, which avoids the difficulty of fixing a positive limit to the area of

* See their Report, Dec. 31, 1839, p. 45, and Seventh Annual Report, section 20.

thinly-populated districts, was embodied in Mr. Serjeant Talfourd's clauses, and has been universally approved of by the profession. Had it been adopted by the commissioners, it would probably have been unnecessary to provide for any exceptions to the rule. From extended inquiries your committee are assured that a population of 4000 in any part of England and Wales might be provided with a duly-qualified district surgeon, residing within an accessible distance.

Fourthly. Articles 10, 11, 12, and 13, fixing the remuneration for certain operations, accidents, and midwifery cases, form another concession to the just demands of the profession: nevertheless, it will be found frequently very difficult to carry into execution the unreasonable provision for a consultation, *at the cost of the medical officer*, except in those instances where there is a partner or qualified assistant whose gratuitous services he may command.

Fifthly. Articles 14 and 15, providing "*substitutes for medical officers*," appear to your committee unexceptionable, and if rigidly enforced will effect a marked improvement on existing practices.

Sixthly. "The mode of obtaining relief by permanent paupers," determined by articles 16, 17, 18, and 19, is another approximation to the propositions of the medical profession.

As the preparation of medical pauper lists is made imperative on every board of guardians, it will obviously lead to a more definite and satisfactory method of calculating the salaries of medical officers.

Seventhly. The regulation relating to the "continuance in office of medical officers" (article 20) is intended to establish an important principle, and is calculated to check some of the abuses of the present system; but your committee doubt whether medical officers will receive either due protection or just consideration so long as they are amenable solely to non-professional authorities, or while their continuance in office depends on the pleasure of parties who are necessarily incompetent to judge respecting the correct performance of medical duties.

It appears both from the 20th and previous articles, that the commissioners still intend to permit the practice of CONTRACTING for medical services.

Your committee feel strongly the necessity of abolishing this practice.

The appointment of union surgeon need not require the execution of any *contract*; nor can previous custom be admitted as a sufficient reason for compelling members of the medical profession to submit to an indignity which is not required of the clergy in their appointment to the office of *workhouse chaplain*.

The preceding remarks are intended to show the existence of some serious imperfections in the new poor-law medical regulations; yet on the whole they constitute an amendment of the present system, and contain within themselves the germs of future improvement.

It is worthy of observation, that the period of the year at which the regulations are issued, virtually precludes their adoption by the great majority of the boards of guardians until March, 1843. They are, however, circulated throughout the medical profession *before* the Government Bill for amending the new poor-law has been submitted to Parliament.

The object of the commissioners in selecting this particular occasion for the announcement of their amendments, can scarcely fail to be rightly understood and properly appreciated.

If, in consequence of the promulgation of this "general order," the poor-law question should be settled by Parliament without any provisions for the regulation of medical relief, it will remain to be seen whether the amendments now directed will be strictly and impartially enforced, or whether the boards of guardians will be allowed to postpone their adoption at pleasure, or to take improper advantage of the numerous exceptions and relaxations provided by the "order" itself.

The amount of benefit to be derived from the new code will greatly depend on the vigilance of the profession in general, of the colleges and associations in particular, and especially of the several weekly medical journals, which have so ably and successfully co-operated in the attainment of an improved administration of medical relief.

The main defect in these regulations is that noticed under the first head, namely, the absence of any specific directions respecting the amount of medical salaries, or the method of computing them.

Whether or not this omission may arise, as has been suggested, from a want of power on the part of the commissioners to establish a principle, or define certain rates of remuneration, is a question of law, on which it would not become your committee to pronounce an opinion; but they do not hesitate to state their conviction that so long as the estimate of medical services is allowed to depend on the varying and arbitrary decisions of different boards of guardians, the profession should continue to appeal to the Legislature for the enactment of certain limits (or at least a minimum limit) to the remuneration of union medical officers, so that due protection may be afforded to the interests of the rate-payers, of the sick poor, and of the medical profession.

The principle which the commissioners have uniformly sanctioned, and continue to recommend, is to combine a salary calculated on the number of *regular* paupers, with a payment per case for others; both of

which modes of payment are perfectly compatible with the recommendation of the Parliamentary committee, that medical relief should be a parochial and not a union charge.

The commissioners "remark incidentally that unless a system of payment per case is adopted," the recommendation referred to "cannot be carried into effect."

This remark is likely to lead to a very erroneous conclusion. The fact is, that there are other systems of remuneration equally compatible with separate parochial charges.

It is obvious that an average payment per head for the several paupers on the list (the fixed salary) may as readily be charged to their respective parishes, as a payment per case for other poor persons.

To carry into effect the above recommendation of the Parliamentary committee, and to secure a constant attention to the diminution of medical districts (a point imperfectly provided for by the commissioners' present regulations), your committee are still of opinion that the remuneration for distance or area should constitute a distinct item in the medical salary; that in every district it should be separated from the *other* (constant) items, namely, medicines and medical attendance, within a mile of the surgeon's residence; and that it should be charged only on those pauper tickets, or cases of illness, or to those parishes or united hamlets which may be more than one mile distant from the surgeon's residence.

In the clauses D and E, lately published by the association,* and submitted to Government, the charge for distance was calculated not on individual cases or paupers, but for entire parishes. The distance was proposed to be measured to the nearest point of the parish; and a charge added for its *area*. It was also suggested† that if the latter charge were omitted, the *mean* distance of the inhabitants of a parish, or of united hamlets, should be estimated, or some central point taken instead of the nearest boundary.

Your committee consider it a matter of comparative indifference, whether the charge for distance be made on parishes or on individual paupers. The "pauper ticket" for the permanent class, and the "order" for the casual poor, would afford an opportunity to the relieving officer to name the distance of the patient from the medical officer, and would thus enable the clerk of the union readily to determine the charge for mileage on account of each parish in the district.

The rates of remuneration‡ should not fall below the minimum rates specified in the clauses D and E before referred to.

Your committee are firmly convinced that if the medical salaries were equitably regulated, and a separate charge at the rate of one-fourth part of the ordinary remuneration added for each mile of the distance between any paupers or parishes, and the residence of the district medical officer, the principal defects in the new regulations would be supplied, and the poor might be properly provided with medical attendance. To this point, therefore, your committee earnestly request the attention of the council, believing that a suitable appeal made to the secretary of state, before the passing of the Poor-law Bill, might be productive of the most beneficial effects.

It should be observed that the president of the College of Surgeons suggests that the secretary of state should, if possible, be induced to "*empower the commissioners*" to fix the salaries. This course was recommended by Mr. Serj. Talfourd* in 1840. And in case the Government should refuse assent to the enactment of certain limits to medical remuneration in the forthcoming Poor-law Bill, it might be advisable to press for the adoption of Mr. Serjeant Talfourd's and Mr. Guth-

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* See Administration of Medical Relief, pp. 133, 134. Sherwood and Co., London.

† Ibid., p. 108.

‡ The sums 2s. 6d. per head and 6s. 6d. per case mentioned by the president of the College of Surgeons, if intended as an average and to include "distance," are decidedly too low. (See Administration of Medical Relief, pp. 70, 107, 108.) The president seems to prefer a salary calculated on the entire population of the district, varying in ratio merely according to its extent. Were Mr. Guthrie more conversant with the details of the question, he would not have represented the "real objection" to this proposition as "purely theoretical," and "one with which the doctor has no concern." "The experience of the last seven years" has in truth *proved* that a salary calculated on the population has no uniform or constant relation to the number of paupers, which differs greatly in different localities. Under Mr. Guthrie's plan, therefore, the amount of medical duty might vary to a considerable extent, without any corresponding variation in medical remuneration; an injustice which may be avoided by adhering to the principle of remuneration sanctioned by the poor-law commissioners. With respect to midwifery, the president "understands the sum of 20s. to be justly claimed by the surgeon, where the distance from his own house in any ordinary case exceeds two miles." In the absence, however, of any explicit regulation on this head, an attempt should be made to obtain a definite increase of remuneration, proportioned to the distance of each case of midwifery (as of other cases) from the medical officer's residence.

* See Administration of Medical Relief, p. 131, clause 3.

rie's suggestion, though it appears to your committee even in that case highly important that the *principle* on which the salaries are to be calculated should be determined by Parliament.

THE POOR-LAW AND UNION SURGEONS.

To the Editor of THE LANCET.

SIR,—I observed in Mr. Guthrie's letter, which prefaced the "medical order" inserted in THE LANCET of the 2nd instant, that one mode by which it is proposed to fix the remuneration of the medical officer, is by paying him the amount of a charge of from three-halfpence to sixpence a head on the gross population, according to its density. Mr. Guthrie seemed to mention this as something novel, lauds it as *fair* and *honest*, and speaks of it as allowing prompt and perfect medical assistance to the poor!

Every one conversant with the subject knows that after the first year of the working of the new poor-law, the salaries of the medical officers in divers unions were *reduced* from sixpence, eightpence, and tenpence, to threepence, fourpence, and fivepence, on the gross population. In densely-populated districts the average was less. At this the "kindness" and "liberality" of Mr. Lewis, as far as I can learn, will allow it to remain, notwithstanding the material increase of the recipients of union medical aid.

Let me remind you, Sir, that the *former* was a reduced and niggardly payment, and that the enforcement of the latter met with great opposition in the boards of guardians, and caused an universal agitation in the profession, which in many places united to oppose so monstrous a proposition. Let me remind you, also, that the commissioners to overbear their opposition, proceeded to induce young and *partially* qualified men, men who had been dismissed the public services, men of low moral character and desperate circumstances, without drugs or instruments, to accept this arbitrarily-reduced remuneration, and that by their authority men of such descriptions were appointed to a great portion of the unions in the kingdom.

But wherefore, Sir, was this reduction made, and such arbitrary measures adopted for its enforcement? Because the commissioners had determined, as a step to no medical relief at all, to render that relief *as inefficient and difficult of attainment as possible;* and it was signified to those who were appointed at these terms, that they should establish medical clubs, into which all the able-bodied poor would be expected to enter, and those who did not should be made to pay the medical officer for their relief by the rigorous enforcement of the loan system. Well, Sir, the resident practitioners were discarded, medical clubs were established, the most sordid modes of treating disease were adopted by the needy *protegées*, and the rights of the poor and the common law of the land were grossly infringed by the enforcement of this anomalous loan clause.

The *total failure* of this precious scheme has been witnessed; all went wrong; the clubs dwindled away; many of the guardians rebelled against the "*orders*" to enforce the loan clause; the needy adventurers, disappointed of half their income, became negligent; patients in acute diseases lingered days without attendance, and were crippled by the unchecked progress of inflammation; fractures and dislocations remained undetected, or were only partially reduced, and patients died before the medical officer could find means or cared to attend!

Thus, Sir, though too feebly portrayed, did this reduced payment and medical club scheme act. But now, that scheme having so completely failed, and a change being *inevitable*, and truly in many places partially forestalled, does Mr. Guthrie whine about the "kindness" and "liberality" of Mr. Lewis, in granting a fair remuneration for surgery, when at the same time he demands the production of a London surgical diploma. Disinterested soother!

Sir, instead of such adulation from such a source, the criminal theorists who attempted to enforce this life and limb-destroying system should be punished with ignominious dismissal, and be made to disgorge their enormous and unearned salaries for the benefit of those medical men whose interests they have so severely injured, and those poor cripples and sufferers who are pauperised by the loss of health and limb, through the operation of their disastrous experiments.*

I am prepared to prove, from actual experience, and by the weekly return books, that the present scale of payment is injuriously inadequate—it was fixed by a most arbitrary stretch of power. In a district with which I am acquainted the medicines dispensed to the poor could not be so cheaply obtained at the lowest prices at which druggists retail. Is this "fair" and "honest?" Sir, I hope the guardians will refute the base insinuation of the commissioners, that they have been unwilling to recur to a more just system, and that Mr. Guthrie will fail to obtain those laurels for this preliminary victory which he seems anxious to engross; but that you will receive a rich meed of praise and abundant thanks for your powerful exertions against the infamous club and tender systems, and that inward satisfaction which will stimulate

* The increase of this class of "permanent paupers" is, in my opinion, the "cause" of the new "order."

you in wringing still further concessions from the coercers of the poor. I am, &c.

F. R.

Bermondsey, April 23, 1842.

P. S.—I hope in the approaching discussion the unconstitutional loan clause will be expunged; it is directly at variance with the common law of the land, which requires two parties to every contract.

THE

POOR-LAW COMMISSIONERS.

NEW MEDICAL ARRANGEMENTS.

To the Editor of THE LANCET.

SIR,—The poor-law commissioners have, in their late manifesto, only given a further stab to the much-execrated new poor-law, for the very poor now find out, as regards their medical attendants, that the "labourer is worthy of his hire," that human nature is human nature, and that if that hire be not given the labourer will not conscientiously do his work. The poor feel that they have been trafficked with in this as in every other matter, and that they are doubly sacrificed when sacrificed to the pelf obtained from the cheese-paring and candle-end economy, which degrades the medical man, and limits him of his rights. The *description* of meat is looked at, and the butcher gets a remunerating price; but, good God! the value of the pauper's *life* is so little heeded, that it is *not* considered necessary to give a remunerating price to him who attends to that pauper's health, and whose own life is frittered away in labours worse than those of Sisyphus!

Instead of throwing dust in the eyes of medical men by their late list of fees, why not honestly allow *a proper remuneration* for attendance upon illness, upon illness which they (medical officers) *meet every day*, instead of a list of fees for operations which seldom or never occur; and the present fees for which, even when they do occur, goes into the pocket of *the surgeon consulted*. Take the case of a district where the surgeon consulted has to repair * seven or eight miles to assist at an amputation, &c., and what is his fee? Certainly *not less* than 5*l*. Where, then, goes the discreditable humbug of pretending that it will benefit the union officer? Now, take a case:—In an extensive parish which I know, there has not been these fourteen years—I might as well say twenty-eight—but speak to that of which I myself am certain;—the medical attendant has not had a compound fracture of the thigh, has not had to trephine, has not had to operate for hernia. How rare in agricultural districts are amputations and compound fractures, *but sickness occurs daily*. Why not pay for what *is daily attended*? And in those cases where a consultation is required, why not make provision? Think they that it is the medical man alone who is injured? Let them know, and let it be proclaimed aloud, that the poor too are injured—deeply, shamefully injured—and that as long as the medical profession is not paid in some degree for its labours, its members, however philanthropic, however charitable, cannot slave themselves to death for that which scarcely pays for the drugs they use. It is of no use to hide it, philanthropy does not require men to kill themselves for their neighbours.

Look, too, at vaccination, and let the commissioners blush while the question is asked, Is it creditable to them, is it creditable *to England*, that men well educated, most serviceable men, gentlemen, are obliged to vaccinate at one shilling per case!!! Aye, and vaccinate *successfully*—and perhaps the operation has to be repeated a sixth time to secure such success.

Their list is a poor and flimsy excuse for fair play. Their conduct is discreditable, and should make both them and the country which suffers it blush. Why will they not, even at the eleventh hour, do their duty as becomes men, as becomes lovers of right and of their country?

A. L.

* Generally a greater distance from some *large* town.

UNION SURGEONS AND THE POOR-LAW.

To the Editor of THE LANCET.

SIR,—Having perused in your Journal of April the 2nd a letter from Mr. Guthrie, president of the Royal College of Surgeons, in which I perceived some remarks that were highly injurious to the junior branch of the profession, I cannot, therefore, pass them over without offering some little resistance.

Mr. G. states that, in the greater number of instances, union surgeons have left the care of their patients to apprentices or students wholly incompetent to fill their places. I can assure Mr. G. that no practitioner who has any consideration for his patients would allow any student or apprentice to perform any part of the office if he thought he was incompetent to do it. But every member of the profession must know by experience that a knowledge of the science of medicine can be obtained under a skilful practitioner as well in the country as in an hospital in town; for in the former you can have a sight of your patient, which in the latter you scarcely are able to do: with regard to surgery, it is quite the contrary, for a knowledge of anatomy, of course, cannot be obtained without dissection; but there are always minor duties to perform, such as dressing wounds, &c.

Again, I would ask Mr. G. what would he wish the apprentice to do during that

three or five years that he requires of them? There is a vague but a true saying, that there are but two ways of doing a thing; that is, doing it well and half doing it. The latter of these the great adviser of the poor-law commissioners seems to have adopted; for if he wished that one particular part of the Act should be carried into force, why not have requested the commissioners not to enforce it until the next election of medical officers; for no doubt numbers of gentlemen have engaged assistants at the last election, many of them having undergone the greater part of their study in town, and are now compelled to part with them at a great inconvenience to both.

Mr. G. again states, that in his official capacity as president to the college, that many gentlemen have made a merit with him that they have attended the poor for two or three years without any previous knowledge of anatomy, surgery, &c.: but he does not state whether these were more proficient than those who had not performed that office. This is the great point for consideration, whether those who have never seen any country practice previous to their coming up for examination, are more proficient than those whose lot it has been to have experienced it. If Mr. G. would set this point of the question at rest, there might be some grounds for his assertion. I remain, Sir, your ever attentive reader,

HAMMATT HAYLEY.

Wincanton, Somersetshire,
April 15, 1842.

THE

HUMANE AND NON-RESTRAINT SYSTEM OF TREATING INSANITY.

To the Editor of THE LANCET.

SIR,—The battle of humanity is fought and won, and little now remains for the "Looker-on" but to register the number of adherents to the new dynasty. He has this week the unqualified gratification of adding to the list the name of Mr. Hitch, of Gloucester, who, with a judicious mixture of enterprise and caution, has gradually carried out the new system in his admirably regulated asylum, and has now presented to the public a valuable report of his proceedings. Twelve months ago Mr. Hitch was a disbeliever in the practicability of the entire abolition of restraint: he honestly said as much in his report, and his asylum exhibited a few, though but few, unfortunates, whom he deemed it necessary to coerce; but the spectacle was so inconsistent with every other regulation of the establishment, and so opposed to the judicious and enlightened views of Mr. Hitch, that the "Looker-on" ventured at that time to prognosticate that the civic crown would be awarded to him, as the first superintendent who had abolished restraint against his own preconceived opinion. Hear the following extract from the report of the visiting committee just published, and acknowledge the fulfilment of the prediction:—

"The visitors have likewise during this year sanctioned—in fact, but not as a universal regulation—the *total disuse* of all mechanical restrictions on the persons of the insane. It has ever been the practice of the medical officers to use as little restraint as was deemed compatible with the safety of the patient, or the protection of those about him; but they admit with the visitors, that, up to this time, *all the patients* are *as securely* managed, and are governed with *much less difficulty* and *disturbance*, WITHOUT than WITH mechanical assistance.

"From the causes above-named, and, perhaps, from others not at once cognisable, the asylum has during the past year exhibited a vast increase of good order and comfort. The exercising grounds, formerly scenes of occasional riot and confusion, with indications of mischief and destruction scattered on all sides, are now laid out as vegetable and flower gardens, and planted with fruit trees. To these, all the patients of each class and sex respectively have constant access, and yet the productions of each are permitted to flourish, and their fruits to attain maturity."

When to this candid and manly avowal the gratifying fact is added, that the humane system is now in full operation under its newly-appointed superintendent at the Royal Hospital at Portsmouth, it may be well said that the battle of humanity is fought and won.

But there are other parts of this valuable report to which I would call the attention of your readers. 1st. The Gloucester Asylum is not confined to pauper patients: it affords, therefore, an opportunity of practically testing the success of the humane system amongst patients of the middle and higher classes of society, which is wanting in pauper asylums. The number of admissions of these patients in 1841 was forty-eight; the number of cures thirty, or upwards of *sixty-two* per cent., being a much larger average than the cures at Bethlem, although the admissions are not limited as in that hospital to recent cases.

2ndly. It brings prominently forward the fundamental principles of the new system of management, that is to say, the treatment of the sufferers as beings not wholly deprived of moral and intellectual qualities, the encouragement in them of habits of self-respect and self-control, the provision for their enjoyment of the beauties of the all-glorious creation, and the privilege to mingle and associate with their fellow-men.

"Musical entertainments within the walls, and attendance on public amusements, are of so frequent occurrence, that they consti-

tute the practice rather than form the occasional source of astonishment in this asylum. Indeed, to so great an extent does our superintendent endeavour to make his patients feel that they belong to the great community of mankind, and are only temporarily separated for their health's sake, that he encourages a great proportion to attend to their religious duties, on Sundays, in the places of worship in the city and neighbourhood; and induces all who can or will separate themselves from the asylum, to take their exercise in the surrounding country; whilst, to give encouragement to those who are inclined to be industrious, he employs all he can, *without* the walls, in various ways, and cultivates nearly twenty acres with the spade in the fields adjoining and belonging to the asylum, with scarcely any other check upon their escape beyond the good feeling subsisting between himself and them."

3rdly. It informs us that the committee are sensible of the public necessities, and are endeavouring to supply the lamentable deficiency in medical instruction, by the formation of schools for the training of superintendents and matrons for public asylums, and of guardians of the more wealthy victims of this dreadful malady.

"During the past year the visitors have made a great addition to the comforts of the patients,—and they trust a grand step towards a public benefit,—by commencing a system of receiving into the asylum a limited number of officers of both sexes, in the double capacity of *assistants and students*, who do not entail any expense upon the establishment, whilst they devote the whole of their time and energies to its business. Those of the male to be medical gentlemen who have completed their professional education; and those of the female, young ladies of good education and manners, and both required to remain twelve months in the asylum. They reside constantly with the patients—head their tables—join in their excursions—promote their amusements—arrange their difficulties—and act in all things as their friends and advisers."

And, lastly. It boldly avows the important truth of the superiority of the public over the private asylum; a truth yet partially obscured by the mist of prejudice, but which ere long will be universally acknowledged, and may God grant universally acted upon.

"The visitors being powerfully impressed with the conviction that the sole objects of this establishment are the *cure* of the patients, and the *kind treatment* of those who are incurable; and with the palpable fact ever before them, that the *interests of the officers consist alone in these*, whereby their responsibilities are diminished, their benevolent feelings and professional pride are gratified —cannot refrain from urging upon those whose relatives are afflicted with insanity, to seek rather the *public* than the *private* asylum. They urge still more the taking this step in the *early stage*, when the disease has not been tampered with by inexperience, nor rendered hopeless by delay—for it is amongst the few regrets which the retrospect of past years affords, that the most painful cases have ever been those in which one or other of these misfortunes has befallen. While it is an acknowledged fact, that of those who are sent within two or three weeks of the commencement of the malady nine-tenths are cured."

Let us now for a while turn our attention from this gratifying report to that Colossus of riches and sloth, the Royal Hospital of Bethlem, with its two physicians, its consulting surgeon, its resident apothecary and matron, its two hundred and sixty patients upon pauper diet, and its 20,000*l.* per annum, and compare it in some essential points with the unpretending establishment at Gloucester:—First. As to the management of its funds. The expenditure of the Gloucester Asylum (repairs and tradesmen's bills inclusive) does not exceed 7000*l.* per annum; its number of patients averages two hundred and thirty, being within thirty of the average number in Bethlem, and of these upwards of one-fourth enjoy the superior dietary, attendance, and accommodation awarded to patients paying liberally for their board! If Bethlem was conducted with similar prudence, the establishment might be increased nearly one-half, and the dietary placed upon a liberal footing. Secondly. As to its efforts for the diffusion of knowledge and the instruction of the young practitioner. Upon these points the returns of Bethlem are an entire blank. It may be that, incumbered with their heavy machinery, they feel they cannot keep pace with the zealous managers of Hanwell, and are content to occupy the second place in public opinion. But are they prepared to bow to every provincial asylum, and be the last to start in the race of improvement? Let us hope that ere another year shall have elapsed, some effort will be made to follow the examples of Hanwell and Gloucester, and some symptoms exhibited of the establishment of lectures and schools of instruction. Thirdly. As to their annual reports. When may we hope to see a report of equal merit with the Gloucester report which we are now discussing, or I should rather say any report at all? In January last the quarterly court directed the publication of the reports of Sir A. Morison and Dr. Munro then presented to them, and the profession expected that those eminent physicians would have redeemed the failure of the former year, and produced compositions worthy of their high reputation. But it is a well-known fact, that the committee to whom the superintendence of the publication was referred, have deemed it prudent to withhold them from the public eye; and if the information they would give be as meagre, and

the statements as contradictory as those contained in the reports so unfortunately published in 1841, the committee have judged wisely. But how long is this state of things to continue? How long will the physicians endure this opprobrium from the committee, or the committee submit to this apathy of the physicians? I am, Sir, your obedient servant,

A LOOKER-ON.

May 7, 1842.

THE LANCET.

London, Saturday, May 14, 1842.

"IT is said that a series of *conversazioni* are to be given at Lincoln's-Inn-fields." We are happy to hear it. It is so long since the members of the College of Surgeons had an opportunity of holding any kind of conversation—excepting that for which they paid twenty guineas—with the *great* men of the Council (which condescends to treat them like wards in Chancery, and to manage their affairs, as well as spend their money, for them,) that the bare announcement is refreshing. For a *conversazione* there is such a variety of topics immediately connected with the interests of the members, and the conduct of the Council, that after the thing has been mentioned one can scarcely help feeling that the Council of the College is about one of the last societies in London that might have thought of it. The Council must be so glad to see the members! The Twenty-one must have so many things to say to them, at the first meetings, after a separation protracted by adverse fates to so late a day, that it would be unkind to disturb the indulgence of their natural emotions, and the trains of thought suggested by Mr. OWEN's antediluvian researches, by any premature discussion.

Leisure will, nevertheless, be found in the course of time for a few topics which may be very conveniently treated in the series of conversations, or "talks," as our red brethren in America would call these deliberative interviews. Two views, we know, may be taken of the meetings. They may be light French "*soirées*" or Italian "*conversazioni*," for the discussion of buns, bavardage, and coffee; or they may become the scenes of serious interesting English conferences,—the commencement of a medical parliament, in which the voice of an injured profession may make itself heard. Which of these classes of assemblies the meetings shall be, must depend on the good sense, the sagacity, and the energy of the members. Nothing should be done rashly; everything should be done deliberately, and in concert. The members of the College have not yet achieved the electoral system; they have no representatives within the walls which they have raised; the meetings must, therefore, be made "*primary assemblies*" of the constituency, to decide at once these questions:—

(1.) Are the members of the College of Surgeons in London, of all the members of the scientific societies of this country, alone incapable of managing their own affairs?

(2.) Are they alone unworthy of being governed by a representative council? Are they alone disqualified as electors, on the ground of deficiency of good breeding, of education, of sound discrimination, and of honest principles?

(3.) If their qualification be admitted, upon what principle are they excluded from their rights? For whose advantage do twenty-one self-appointed, self-perpetuating gentlemen expend 12,000*l* a-year, without consulting their fellow-members, letting them into the secret of their deliberations, or rendering any satisfactory account of their stewardship?

(4.) What has the Council of Twenty-one, in its corporate capacity, ever done to promote in the slightest degree the interests of the members at large, in any question of importance,—the poor-law, for instance, or the affair of the *barrister*-commissioners in lunacy?

And are these questions of no moment? Are they matters to be set aside for tea and coffee, and gossip, or even for Mr. OWEN's

scientific discourses on the *mylodon* and *glyptodon*? Her MAJESTY'S Ministers are responsible to Parliament; the Legislature to the constituency; town-councils to the ratepayers; guardians to parishes; the councils of scientific societies to the members at large, who elect them annually; but the Council of the London College of Surgeons remains an irresponsible, unreformed monstrosity in the midst of English institutions—an antediluvian relic of all, in human institutions, that is most despotic and revolting, iniquitous and insulting, on the face of the earth. According to the law of correlation, Mr. OWEN, treading in the steps of CUVIER, though not with the assured step of our great GRANT, divined the whole structure of an animal from the inspection of a single part. The same law will apply to political structures; and when we put this single fact —"irresponsibility in the management of a public institution"—before the eyes of the student, it gives him the key to the elaborate evils which have marked the course and history of the "Twenty-one" of the College of Surgeons. This is the frightful "claw;" he will readily conceive what was the rotatory power and agility of the grasping arm; how the teeth were sharp, and set like scissors, to cut and tear; how keen the stomach was in digestion, and how ruthless and fierce the instincts which governed the whole organisation. "A huge species of bear, "far exceeding in size the grisly bear of the "rocky mountains of North America, used "to prowl over Europe, *proofs of which are "met with even in our own country"!* Too many proofs, we regret to say, to leave a doubt on the subject. But the bear has perhaps already suckled its HERCULES.

The members of the medical corporations have been long-suffering. No body of men ever submitted to wrong, suffered neglect, or bore contempt, with more resignation. They have been very patient. How much longer will they allow twenty-one men to riot over them in usurpation? They have been full of forbearance; is there not a danger that their forbearance, if protracted much longer, may be mistaken for imbecility, poltroonery, or servility? Will not the "butchers and bakers," with whom we were once taunted, be exclaiming against us, and reminding us that we alone possess irresponsible bodies, which they have had the intelligence and manliness to exchange for representative councils? Are *twenty-one* men to place their feet on the abject necks of ten thousand members for ever? Will no man have the heart or head to demand justice in the name of his brethren, at the ensuing meetings?

Mark, we do not say that anything should be done hastily, or without due consideration. The argument is all on our side. The justice is all on our side. All that the cause requires to secure its triumph is calm, and repeated, and well-supported discussion. For this the meetings will afford peculiar facilities. We have driven the Council into some things useful and liberal; but we never expect them to resign their power. It must be taken out of their hands by moral force. We shall respectfully submit to our brethren, from time to time, such topics as appear to be suitable subjects for discussion at the "*conversazioni.*"

AT the last meeting of the *Medical Association* of the North of England several important questions were mooted, for a notice of which we regret that we cannot find space. The following piece of advice may furnish hints to other associations, and will prove that the practitioners of the North of England have the sense to understand, and the manliness to advocate, an honest and efficient reform of the profession. They go to the root of the matter in a straightforward English way:—

"In the mean time the members of the profession must be vigilant and active; and in order to meet any emergency which may arise during the ensuing twelve months, your Council have to recommend that this meeting do authorise their successors in office to act as circumstances shall require in reference to medical legislation. They would urge the members of the association, individually, to impress upon members of Parliament the principles of reform which have been advocated by this and other associated

bodies, and which have been approved and supported by some of the most distinguished ornaments of the profession—the principles, namely, of, 1. A full and fair representation of the professional body in the government of the medical corporation, and in the appointment of the medical members of any general board or council which may hereafter be formed. 2. An uniform qualification as the requisite for a licence to practise medicine, to which branch of it soever the licentiate may more *especially* direct his attention, and irrespective of any degree or title which he may desire to possess. 3. Reciprocal privileges for licensed practitioners throughout England, Scotland, and Ireland. 4. A protective power, both for the public and the profession, against spurious and unauthorised practitioners of medicine or surgery."

The Council, in their report, discuss at some length the outlines of a Bill ascribed, somewhat gratuitously, to Sir JAMES GRAHAM. The discussion was perhaps premature. We are well aware that certain outlines were handed about, and announcements made in the anti-reform journals; but every person who had the slightest knowledge of such matters saw through the trick. The wish was "father to the thought." The abstracts embodied the reform which the corporations desired to see introduced by Sir JAMES GRAHAM. Such newspaper paragraphs as "That gallant and distinguished "officer, Colonel ——, is shortly to lead "to the hymeneal altar Lady CAROLINE "——, only daughter of Viscount ——;" and "The Reverend J. J—— is about to be "raised to the vacant bishopric; Sir ROBERT "PEEL could not have selected a more "zealous champion of the church in these "perilous times," are well understood. Our Newcastle friends would immediately infer that neither Lady CAROLINE nor Sir ROBERT PEEL had themselves ever thought of the distinguished aspirants. Sir J. GRAHAM thought, we believe, as little of the absurd and illiberal measure of spurious reform laid at his door, and had no intention whatever of adopting it as his legitimate offspring. Looking at the fact, that Sir JAMES GRAHAM well understands the principles of reform, was a party to Parliamentary reform, and led the way in introducing the representative principle into the municipal corporations; looking also to the comprehensive nature of Sir ROBERT PEEL's present measures, we have no right to assume that the present Government will be the instrument, in the hands of the monopolists, of a paltry, shabby, sham reform, which would be injurious to the public interests, and would disgust the whole body of the profession. A radical reformer, or Lord JOHN RUSSELL, would introduce a better Bill, but we have no doubt that the principles of Sir JAMES GRAHAM's measure will be very different from those in the outlines. When the excellent Secretary of the Newcastle Association puts on his beaver, and lifts his spear again in war, he will no doubt know better than to tilt at men of straw in "outlines" which should be committed to the flames without noise. Sir JAMES GRAHAM is as likely to bring in a Bill of the kind referred to, as he is to sink a coal-mine in the vicinity of London.

We are happy to perceive that Mr. CARTER's valuable services are appreciated by the members of the Newcastle Association, who presented him with "an elegant silver tea-service," after the dinner, in a manner which must have been most flattering to his feelings. The medical profession are never ungrateful for public services.

BRITISH MEDICAL ASSOCIATION.

Exeter Hall, May 3, 1842.

Dr. WEBSTER, President, in the chair.

THE president gave a verbal report of some length of the deputation to the poor-law commissioners on the subject of the new orders lately issued by them, and on parochial medical relief generally (a full report will appear in THE LANCET on a future day).

On the motion of Mr. HOWELL, seconded by Mr. HOOPER, it was resolved unanimously,—"That a deputation should wait on Lord Campbell on the subject of medical reform."

The following is a copy of the petition which Mr. T. S. Duncombe, M.P., presented to the House of Commons on Thursday, the 5th of May, on behalf of the president and council of the association:—

"That your petitioners belong to a profession, nearly all the members of which will be called upon to contribute to the proposed income-tax, although great numbers of them

have clear incomes, but little exceeding the minimum income which it is proposed to tax in the Bill now before your honourable House.

"That your petitioners have sunk capital, oftentimes their whole patrimony, in prosecuting the study of their profession, and in acquiring the skill which may enable them to discharge their duties with advantage to the community; that a small proportion of their income is the interest of the money which they have sunk in education, but that the greater part of it can only be considered the wages of incessant and painful labour by day and night; and that as their incomes are derivable from their personal exertions, the whole will cease when their powers fail from accidents, sickness, infirmity, or death.

"That your petitioners will cheerfully contribute their due quota to the revenues of the state, and consider a property-tax one of the most equitable that can be levied; but that an uniform tax on incomes, irrespective of the contingencies upon which they depend, will bear with peculiar hardship on the profession to which your petitioners belong, and will throw on them a great part of the burthens which should be borne by the possessors of perpetual incomes derived from imperishable sources.

"That since the last income-tax was raised the doctrines of annuities have been placed on a strictly scientific basis, and that the present money-value of life-annuities is shown in a table in general use for life-assurance, as generally accurate and as easily understood as the multiplication table; that it will, therefore, be calculated to bring discredit on your honourable House to overlook the existence of this table, and to revert to the false and unjust principles of the former income-tax, by assuming that life incomes, and incomes in perpetuity, are of the same value, and represent the same amount of property.

"That if the interest of money be 4 per cent. the present value of an income of 1000*l.* a-year enjoyed by A in perpetuity, is 25,000*l.*, while the present value of a life annuity at the age of forty enjoyed by B is 14,334*l.*, and that the new tax to be equitable should be in that ratio of 25 to 14½ when applied to the two parties; that their property is respectively 25,000*l.* and 14,334*l.*, which, if taxed at the rate of one-tenth per cent. per annum, would yield nearly 25*l.* and 14*l.* annually.

"That as the income of professional men depends on many contingencies, it is not equal in value to a life annuity; but that as the exact value of these contingencies has not been determined, and any attempt to determine it may give rise to disputes, your petitioners do not press it on your attention, but humbly pray—

"That your honourable House will take into account the fact, that the value of the incomes of professional men does not equal, and cannot exceed the value of life annuities, and distribute the pressure of the proposed property-tax equitably by levying it on the present value of the incomes of the different classes of the community."

Adjourned to the 17th of May.

MEDICAL SOCIETY OF LONDON.

Monday, May 9, 1842.

Mr. Pilcher, President.

BLOOD IN THE BRAIN IN ANIMALS BLED TO DEATH.—THE LIQUOR CINCHONÆ.—LABOUR WITHOUT PAIN.

Mr. Crisp, in relation to the late discussion on the quantity of blood in the brain, stated that he had last year made a series of experiments, with the view of determining the condition of the brain in animals who had been bled to death. The result of these experiments was quite opposite to that which Dr. Kelly had stated to be the result of those experiments which he performed for a similar purpose. Dr. Kelly had found that the brain in his cases was always full of blood, while he (Mr. Crisp) on the contrary had found it to be bloodless; nor could he discover any corresponding quantity of serum to make up the deficiency. The animals he had experimented on were rabbits and dogs, and they had been killed by a division of the carotid artery. In the same kind of animals killed by poison and other means the brain was found to present a very different appearance.

Some conversation took place respecting apoplexy and its consequences between Mr. Proctor and Dr. Clutterbuck.

THE LIQUOR CINCHONÆ FLAVA.

Mr. Robarts inquired whether any of the members had used this medicine in neuralgic affections since the time he brought it before the notice of the society two years ago? Since that period he had used it in many cases of neuralgia with the most beneficial results. He related the case of a young hysterical female, about twenty-seven years of age, of spare habit, and unmarried, who received a blow on the breast, which gave rise to much pain in that region. She applied to him a week afterwards. On examining the breast he could detect no inflammation; there was no redness or tenderness; her general health was good, her catamenia regular. A few leeches were placed over the affected part, and some aperient medicine was administered. This failed in affording relief to the pain under which she suffered. A mixture of decoction of aloes and infusion of gentian, and afterwards large doses of ses-

quioxide of iron, were employed without the least benefit. The liquor cinchonæ, in doses of eight minims gradually increased to twelve minims three times a-day, was administered, and in three days the pain was entirely gone, and had not since returned, a week having elapsed. He was quite unacquainted with the mode of preparing the medicine, which was made by Mr. Battley. He believed, however, that eight minims of it were equal to half a drachm of the powder of bark. He considered it to possess decided advantages over quinine, as it retained all the properties of the bark, and was more stimulating and aromatic than that preparation.

Mr. CRISP had tried the preparation in question in three or four cases of neuralgia, but it had not succeeded in relieving the pain.

Mr. LINNECAR had a prejudice against concentrated preparations, because he thought the aroma and other properties of the medicine must be destroyed by the process to which it had been subjected; he, therefore, preferred the fresh-made infusions and decoctions. He had not found the concentrated decoction of sarsaparilla so serviceable as that made in the usual manner. He thought, in reference to the preparation of bark under discussion, that it would be inferior to quinine in those cases of neuralgia which took on a periodic character.

Dr. BENNETT could not see the therapeutic difference between the liquor cinchonæ and the common preparations of bark, as the decoction and the infusion.

Dr. ALISON had used the liquor cinchonæ in several cases of neuralgia without the production of any benefit.

Mr. ROBARTS observed, that the liquor cinchonæ could not be employed with advantage in any case in which the stomach was disordered, or in which there was any symptom of inflammation. This was not the case with quinine, which was less stimulating. The advantages of the liquor cinchonæ consisted in its being a convenient and concentrated preparation of bark.

Mr. PROCTOR said, that the case of irritable breast detailed by Mr. Robarts could not be fairly called one of neuralgia; it was probably dependent on hysteria, and therefore would be as well treated by one tonic as another.

Mr. PILCHER had been much indebted to Mr. Robarts for his mention of the liquor cinchonæ on a former occasion in the society. Soon after that period he was consulted in a case in which the medicine in question was of marvellous efficacy when all other remedies had failed. The subject of this case was a captain who had been many years at sea. When a boy he had met with a compound fracture of the leg, which had been badly set, and had remained in a weakened condition. Twenty years afterwards he fell into bad health in consequence of privations he had undergone on board ship, and was seized with a most severe pain in the neighbourhood of the fracture. He placed himself under the care of an intelligent surgeon, who thought the disease might be removed by sea air, and recommended him to proceed on another voyage. This he did not consent to, and Mr. Pilcher was called to see him. He found his health very much deranged, the affected limb much weakened, and so painful, that he could only exist under the influence of almost poisonous doses of quinine and morphia. The liquor cinchonæ in five-minim doses was administered every two or three hours; in a short time the pain entirely ceased, the health became restored, and he went again to sea, only armed with a bottle of the liquor cinchonæ! He (Mr. Pilcher) had employed this medicine in a variety of other cases, in some it failed, in others it was of service. It never affected the brain in the manner in which large doses of quinine occasionally did, and was altogether an excellent and elegant tonic.

PARTURITION UNDER UNUSUAL CIRCUMSTANCES.

Mr. LINNECAR related the following case:—He was requested to see a lady, about twenty-six years of age, pregnant with her first child, and within about five weeks of her full time. He found her suffering from an enormous swelling of the right leg, which was enlarged from the foot inclusive, upwards to the trochanter major; the nymphæ and labia, but particularly the former, were much enlarged, and projected and rested upon the thighs; the general health was good, but her sleep was disturbed by a peculiar catching in the limb while she was dreaming of swimming in the air. The cellular tissue of the affected parts was so much distended that several punctures were made in the nymphæ, from which a considerable quantity of fluid oozed. Several punctures were subsequently made in the leg below the knee, from which, also, there was a considerable discharge of serum. The enlargement, however, still continued; inflammatory action came on round the punctures in the leg; and it became a question whether it would not be advisable to produce premature labour. This latter step, however, was rendered unnecessary, as labour came on naturally last Saturday, on which day Mr. Linnecar was hastily summoned to his patient. On his arrival he found the membranes had already ruptured, and the head of the child was presenting; the uterus could be distinctly felt to be acting when the hand was placed on the abdominal parietes, but the patient *experienced no pain whatever*. The usual pains came on, however, as the pressure on the perineum increased, and the child was born alive. There was scarcely any discharge

whatever during the labour, and there was none of the usual lochial discharge. There was, however, a most copious discharge of water from the uterus as well as from the leg: the leg and thigh that morning (Monday) were diminished in size, but the cuticle of the leg was dead, and there was a kind of purulent secretion underneath it; with this he had not interfered; the leg was tender; the pulse about 100, and small. There was yet no secretion of milk. Looking at the facts he had stated, that there was no pain during parturition, and no natural discharge during or after the labour; he thought such a state of the system was indicated, that a fatal result to this case must be anticipated. In all the cases which he had seen of labour occurring without pain, the mother had fallen a sacrifice. He thought the presence of pain was a beautiful provision of nature for the preservation of the offspring.

Mr. Hooper had seen several cases of labour unaccompanied by pain, in which the mothers did not die. In a case of a woman labouring under venereal disease, for which her husband had salivated her, labour came on during an attack of spasmodic cholera, without the woman being at all conscious of the proceeding. She recovered, the child was dead.

Mr. Proctor thought that the morbid condition of Mr. Linnecar's patient previous to the labour, would have much influence on the fatal result, should such occur.

Dr. S. Alison should not look so unfavourably as Mr. Linnecar did on the case under discussion. He had attended many women who had extreme anasarca of the legs previous to parturition, but who had done well. Cases of labour without pain had occurred in his practice; they were *not* fatal.

Mr. Crisp alluded to a case shortly to be brought before the profession, in which a woman, thirty-eight years of age, was delivered at the full time of a dead child, without any pain whatever.

Mr. Pilcher suggested that in Mr. Linnecar's case the discharge was from the nymphæ and not from the uterus, which, he thought, was not secreting at all. Was it not probable that uterine phlebitis was present?

Some conversation took place in the course of the debate on the practice of making punctures in the leg, below the knee, in cases of anasarca.

Mr. Hooper had resorted to this proceeding in many cases with a good result, and had never known it to be followed by bad consequences.

Mr. Linnecar and Mr. Clarke had seen it productive of much mischief.

INSTANT DEATH FROM THE SHOCK OF A BULLET.

Post-mortem Examination of the Body of Timothy Daly, killed by a Pistol-bullet, May 5, 1842.

The body was well-formed, and in good condition. A considerable quantity of blood had flowed from the wounds, so as completely to saturate the flannel-waistcoat which he wore next his skin. There was a bullet-wound of a round shape, and of the size of a sixpence between the seventh and eighth ribs of the left side, and another on the right side over the last rib.

Head.—The skull-cap, skull, and dura mater, were quite healthy. The arachnoid membrane and pia mater were slightly congested, but they were not thickened, nor was there more than the natural quantity of fluid effused beneath the membranes and into the cavity of the ventricles. The substance of the brain was quite healthy.

Chest.—There were some slight adhesions between the costal and pulmonary portions of the pleura. The lungs were perfectly healthy, and uninjured. The heart was also uninjured, and all its parts, including the valves, were of the natural and healthy structure. The blood was universally fluid, but there was none extravasated into the cavity of the chest. The seventh and eighth ribs on the left side were fractured; the last rib on the right side was also fractured. The diaphragm, with the exception of a few of its muscular origins from the ribs on the left side, was quite uninjured.

Abdomen.—The stomach was removed and examined: it was distended with half-digested food. There was an aperture with blackened edges, of about the size of a shilling, an inch below the junction of the œsophagus with the stomach on its posterior surface, and another corresponding aperture on the anterior surface of the stomach, also at the cardiac end, but lower than the aperture on the posterior surface. The liver was perfectly healthy and quite uninjured. The intestines were also uninjured and healthy.

The thoracic and abdominal portions of the aorta were carefully examined, but were found to be quite uninjured, nor was any important vessel wounded.

In this case death occurred almost instantaneously after the discharge of the pistol; and must have been caused by the sudden shock given to the nervous system by the passage of the bullet through the distended stomach. No other cause of death can be assigned, for no other viscus was wounded, nor was any important vessel ruptured.

R. H. Semple, Surgeon.

May 9, 1842.

THE BRAIN—MR. SAMPSON AND DR. DICK.

To the Editor of THE LANCET.

SIR,—I perceive that in your last number Dr. Dick announces his intention of retiring from the discussion on phrenology, into which he was pleased to enter on the 18th of February. Even this simple announcement, however, is characteristically accompanied by a serious misrepresentation, and I must, therefore, trouble you with the following remark.

In a note to his letter, Dr. Dick says,—"Mr. Sampson, in one of his letters, accuses me of culpable carelessness. I have to charge him, and on better grounds, with the same fault. He persists in accusing me of asserting that Mr. Combe believed the movements of the brain, which he describes to be *literally* muscular. Mr. Sampson seems to be unaware of the distinction between the words 'analogous' and 'identical.' I must also inform him that the relative pronoun 'which,' that occurs in the tenth last line of my paper of Feb. 18, does, by the legitimate rules of English grammar, refer to the antecedent 'resemblance,' as well as to 'muscular action,' and that accordingly (as I do not think Mr. Combe a fool) it was to the former of these antecedents that the word 'which' was *meant* by me to apply. I have taken the trouble to enter into this explanation in the hope of inducing Mr. S. to be less culpably rash in his asseverations for the future."

In reply to this, I have only to observe that the statement which it contains, that I have "persisted in accusing Dr. Dick of asserting that Mr. Combe believed the movements of the brain, which he describes to be *literally* muscular," is entirely an invention on the part of that gentleman.* Under these circumstances Dr. Dick must allow me to return to him the warning reproof with which he so solemnly closes his very ample but unnecessary explanation.

Dr. Dick, in concluding, professes himself satisfied with the results of the discussion. Considering that he has drawn upon himself the strictures of three intelligent correspondents (all of whom remain unanswered), this gratifying avowal could hardly have been looked for. I am sorry that I cannot profess myself equally well pleased. In order to render me so, it would have been necessary that Dr. Dick, previously to his abandonment of the discussion, should have apologised, if not for his fabrication of my statements and the warmth of temper which he has displayed, at least for the inaccuracies of which he has been doubly convicted in his charges against Mr. Combe. Although it may have appeared expedient for him to retire from the argument, I cannot help regretting that by withholding a manly acknowledgment of his errors he has chosen to retire from it with discredit. I am, Sir, your faithful and obedient servant,

M. B. SAMPSON.

Clapham New Park, Surrey,
May 7, 1842.

PHRENOLOGY AND CRIMINAL JURISPRUDENCE.

To the Editor of THE LANCET.

SIR,—I beg to represent to Dr. Dick the surprise and dismay with which many of your readers have read the notification of his intention to retire from the discussion of phrenology in relation to criminal jurisprudence, before he has redeemed the promise he gave when he set out upon his opposition to Mr. Sampson's doctrine.

Dr. Dick wrote thus: "I apprehend that *a single argument which I shall bring to bear* will, with persons accustomed to moral investigation and discussion, and to a study of the harmony and adaptation everywhere manifested in the intellectual condition of man, *furnish an irrefragable answer to Mr. Sampson's statements, and an insurmountable objection to some of the most fundamental principles of phrenology.*"

This was a large promise, and raised large expectations in the minds of those who enter

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* The words used by me are as follows. In THE LANCET of March 19 I say, "It will be found in the description of the movements which he distinguished, Mr. Combe does not make the slightest mention of their having a *resemblance* to 'muscular action;'" and in recalling the subject to Dr. Dick's memory in the number for April 23, I go on to remark,—"In his first letter Dr. Dick charged Mr. Combe with having fallen into a laughably incorrect analogy, by supposing that certain motions which he had observed in the brain of a young girl at New York, arose from muscular action, or *something analogous to it!*" It is true that further on (but in the same paragraph) in calling upon Dr. Dick to acknowledge his error, I use the words "muscular action" without *repeating* the qualification, which a few lines previously I had so distinctly made; but this omission, as it could not in the slightest degree mislead my readers as to the nature of the accusation against Dr. Dick, is wholly without importance. In dealing with Dr. Dick, however, I confess that it would have been prudent to have made the otherwise almost needless repetition, since although the error of that gentleman is just as glaring, whether he asserts Mr. Combe to have fancied that the movements in question proceeded from muscular action or from something analogous to it, all possibility of quibbling upon the point would by this means have been removed.

tain prejudices against the doctrines of the phrenologists: these expectations were considerably increased when they beheld the imposing "M.D." after the learned doctor's name. How cruelly have these poor people been disappointed! The learned doctor surely will not, must not, desert them thus, without paying, at least, an instalment of the large debt which he owes to their prejudices. It is not

"Words of learned length and thundering sound"

that they want. It is not figures of rhetoric, they can manufacture them themselves. Expressions of the doctor's satisfaction with the results of the discussion, so far as it has gone, will not satisfy them, more than the beaten pugilist's being *satisfied* will satisfy his deluded backers. The doctor will no more persuade them that the cuttings and slashings of Mr. Davey's letters are "agreeable," than the fox, learned in travel, but minus his tail, could persuade his fellows on his return that it was agreeable and fashionable, indeed quite the thing in the polite world, to have tails cut off. The doctor may grow merry, crack his jokes, and shake his sides with laughter, at the matter of fact of George Combe, but these poor objects can sympathise no longer with his jocosity, for they know full well that the merry crackling of the doctor's thorns will never make their pot to boil. It is the "single argument," the dear little gem of an argument, the "irrefragrable answer" that they want. O deluding doctor! how can you find it in your heart to desert them thus?

For myself, I must confess I never did expect this "irrefragable answer," but having asked, by implication, of Dr. Dick, in my letter in THE LANCET of the 16th ult., merely to explain how he reconciled two apparently inconsistent propositions of his own with each other (his two main propositions), or, admitting their inconsistency, which of them the doctor intended to hold by. I did expect an answer, by the way, in his reply to Mr. Sampson, Mr. Davey, or Mr. Hytche, because I believed that all persons in earnest must have a desire to make themselves understood; and because there was nothing in my letter uncourteous or disrespectful, which could in any way justify this want of courtesy. I am, Sir, very respectfully, your most obedient servant,

W. MILLER.

Islington, May 10, 1842.

THE RESPONSIBILITY OF CRIMINALS.

To the Editor of THE LANCET.

SIR,—Phrenology appears to my humble comprehension to leave the question of the responsibility of criminals just where it found it. No man can justify a theft by pointing to his acquisitiveness, or a murder by drawing attention to his immense destructiveness. That some men are more virtuously and others more viciously disposed—naturally so disposed than men in general—is unquestionable; but the law very properly makes no allowance for a bad temper or immoral propensities; and it would be thought very extraordinary if a prisoner at the bar, on being asked "what have you to say why judgment of death should not be recorded against you," were to exclaim, "*My lord, my destructiveness is enormous, I pray your lordship to grant me a phrenological inquiry.*" Let phrenologists, when they examine the heads of criminals, and mark the unhappy developments of these persons, consider also how the passions have been fostered, how they have been encouraged, until they would brook no restraint. To affirm that the impulse to crime cannot be resisted by persons of a sane mind, is, to say the least of it, a most dangerous doctrine, one, if generally admitted, would palliate unduly many an enormity. But if the opinion be countenanced, who is to fix the limits of its operation? who is to say where the impulse was irresistible, and where it was not? Is this to be made a phrenological question? I hope not,—both for the sake of the interests of society, and the impartial administration of justice. I admire, Sir, the genius of Gall, and his discoveries will sustain no damage from attacks like those of Dr. Dick—not even though he shelter himself under the authority of Müller; but phrenological problems are difficult of solution, and require the greatest judgment and acuteness. They are no schoolboy's tasks. Phrenology is a great auxiliary in throwing light upon the mind, but it is not the only thing which is needed. Men of wretched developments keep free from crime; others commit it whose heads are more propitiously formed; and how far a person can control and contend against his passions and desires, it must require a most sagacious phrenologist to show. I would, Sir, be obliged by your inserting this brief note of

SPECTATOR.

May 11, 1842.

PHRENOLOGY THE TRUE PHYSIOLOGY OF THE BRAIN.

To the Editor of THE LANCET.

SIR,—I have read with much interest the correspondence published in THE LANCET between Mr. Sampson and Dr. Dick, and also the contributions which have been volunteered by other gentlemen in support of the views advanced by the former of the two controvertists. The impression left on my mind is one of the thorough soundness of Mr.

Sampson's propositions. In perusing that gentleman's letters, I have been forcibly struck by the candour, courtesy, clearness, and logical precision which they display; qualities which, I regret to think, are in no wise characteristic of the productions of his opponent. I speak advisedly. Dr. Dick's want of candour appears in his shrinking from acknowledgment and apology when misrepresentations are brought home to him; his want of courtesy in the unwarrantable imputations and insinuations which he puts forth; his confused and illogical mode of stating his views in every paragraph of his letters. Lest the last assertion seem too general in its character, I may cite as a remarkable instance the third paragraph of his first letter, where assertions, inferences, and qualifying admissions, where the probable and the actual, causes and consequences are so intermingled, that a vague notion of opposition on Dr. Dick's part to something "dangerous" is all that can remain on the mind of the reader after its perusal.

Dr. Dick in his farewell letter takes leave, I see, to call in question Mr. Sampson's grammatical knowledge, in consequence of the latter having, as he states, mistaken the antecedent of a relative pronoun. I beg to assure Dr. Dick that the sentence which he defends must undergo a radical reform before it can safely be submitted to the test of "the legitimate rules of English grammar;" at present it is neither grammatical nor logical. The relative "which" following the words "muscular action," may, for aught that appears to the contrary, belong to "intensive states of the brain," or to "muscular action," or to "slightest resemblance to those of muscular action." No one disputes Dr. Dick's knowledge of his own meaning; but it is still to be regretted that he has not the happy faculty of imparting his ideas to others. I must further beg to inform Dr. Dick, that the absence of knowledge on the part of himself and other anti-phrenologists regarding "the intensive states of the brain," is no ground for rejecting Mr. Combe's evidence relative to the phenomena observed by him. We all laugh at the King of Siam for refusing credence to the assertions of the Dutch merchants when they told him that water became hard in their country, and yet he "had no reason to believe" that the influence of cold ("of which, indeed, he knew nothing") produced the effects described. I am, Sir, your obedient servant,

R. W. Heurtley.

Kensington, May 10, 1842.

APOTHECARIES' HALL.

COMPLAINT FROM A LECTURER.

To the Editor of The Lancet.

Sir,—There is a by-law of the Society of Apothecaries to the effect, that no lecturer shall be recognised until he produces testimonials of ability from *two* individuals eminent in the subject to be lectured upon. In 1840, previously to my commencing the course, I produced a certificate of ability, &c. from *one* gentleman who was known to be an eminent chemist (Dr. Pereira), and another from a senior colleague of mine, who must necessarily be well acquainted with chemistry from the nature of his collateral studies.

In answer to these communications, the hall sent me by post a copy of their regulations: on the envelope inclosing which was written, a laconic request that I should turn to a certain page, and examine a certain line, when it would be seen that their regulations had not been strictly complied with. This answer I showed to my senior colleague, just alluded to, and at his suggestion did not think necessary to notice it further. The hall admitted all my certificates, and passed my pupils up to the present time, when gentlemen of my class were informed that their lectures must be attended over again: this information, I should remark, was made by the *registrar*.

Immediately on learning this objection, I supplied the hall with the required additional certificate; but finding the annoyance still continue, I called on the secretary, who denied that the certificate in question had been received. At length, however, he found the letter containing it, amongst some others which were as yet *unopened from want of time*.

From Mr. Blatch, the secretary, I have received much politeness; yet I cannot but regret that he had so little time at his command, as the board of examiners might have known last Thursday that their scruples had been complied with, and I might have received my formal recognition on the Friday.

I need hardly explain that the hall regulations having *now* been fully complied with, my recognition follows as a matter of course; and that, moreover, this recognition is *retrospective*, according to another by-law of the Apothecaries' Company. Under these circumstances I cannot but hold the registrar as highly censurable in trying to frighten my pupils by a silly threat. At *least* it might have come from some other quarter. I am, Sir, your obedient servant,

John Scoffern, M.D.

13, Michael's-place, Brompton,
May 10, 1842.

THE OSTEOTOMIST OF PROFESSOR DAVIS.

To the Editor of The Lancet.

Sir,—I have been informed by Mr. Simpson, of the Strand, that no comparison had really been made between the osteotomist, to which I alluded in my last letter as being a

blunt instrument, and the kephalepsalis, and that it was by inadvertence shown to me (not by himself) at the same time with the kephalepsalis.

Mr. Simpson further states, that he has in his possession a correct specimen of my father's instrument, competent (as it should be) to remove finely cut sections from a piece of writing paper without the least trace of a ragged edge.

I am obliged to Mr. Simpson for his communication, as it enables me to remove an impression which an observation in my last letter was calculated to convey to his prejudice, implying that he had made an unfair comparison, and of which I entirely acquit him. I am, Sir, your obedient servant,

JOHN HALL DAVIS, M.D.,
Physician-Accoucheur to the
Royal Maternity Charity.

17, Russell-place, Fitzroy-square,
May 3, 1842.

P.S.—The osteotomist may be seen at Mr. Botschan's, 35, Worship-street, Finsbury-square; Mr. Coxeter's, Grafton-street East, University College, London.

INACCURACY OF DISPENSING CHEMISTS.

To the Editor of THE LANCET.

SIR,—On Saturday last a physician in my neighbourhood saw a little patient of mine, and prescribed the following powders:—

℞ *Pulv. Jacob.*, grs. iij;
Potass nit., grs. ix;
P. trag. comp., grs. xv. Ft. Pulv. omni nocte sumendus.

On returning home, the mother called in at a respectable chemist's shop to get the prescription dispensed, when she received three white powders weighing only ten grains each: on my calling and looking at the prescription and powders, I remarked they were too small, and directed the prescription to be sent to another chemist, when to my surprise the same quantity of white powder was put up and sent. Does not this corroborate what I wrote on this subject in THE LANCET on the 15th of May, 1841, signed "Medicus?" I am, Sir, your obedient servant,

M. ROWE.

May 5, 1842.

MEDICAL OFFICERS OF HOSPITALS.

To the Editor of THE LANCET.

SIR,—At the last anniversary meeting of the North of England Medical Association, a report was read by Dr. Glover, from a committee appointed by the council of that body to consider the subject of medical appointments to hospitals and other public charities: in which report was contained a recommendation, that where *pure physicians or pure surgeons could be found, the preference should be given to them over general practitioners.* Does the association think that they can have the support of the general practitioner, while they authorise reports that are thus calculated to injure, by libelling, nearly the whole body of medical practitioners of this country?

But I am indeed surprised, when I recollect that the persons who were the advocates of this report were either general practitioners, or had lately been so. This report was brought forward, as I have before said, by a Dr. Glover, who only a few months ago was a *general practitioner* himself, but who has lately obtained a Scotch degree, and has set up as a pure physician. It was also supported by Dr. Embleton, who has only within the last few months taken from off his brass plate the word "surgeon, &c." Thus it would appear that the two "pures" are now qualified for the office of physicians to public charities, which they were not a few months ago. Upon their own arguments, they were not competent for such offices a few months ago. But what surprised me the most was, that the report was supported by so intelligent and good a practitioner as Mr. T. M. Greenhow, who is a general practitioner, and one of the surgeons to the Newcastle Infirmary, and to the Eye Infirmary, and the Gaol. This is what the Yankees would call an "everlasting awkward fix;" for either Mr. G. is, according to the logic of the "pures," unfit to hold the offices which he does hold, or else they have made *a few exceptions.*

But I would like to be informed on what grounds a general practitioner is to be considered inferior either in talents or station to a pure physician with a Scotch or foreign degree. I should also like to know why a surgeon who is a general practitioner is less qualified to perform surgical operations, on account of his acting in a medical capacity. Where, moreover, are the "pure" surgeons to be found in the provinces; I do not believe that there will be found a pure surgeon out of London or Edinburgh in England. But if they were as plentiful as pure physicians, I do not think that they are better fitted to fill the situations as hospital surgeons; but that the general practitioner is better qualified than the pure, whose practice must necessarily be exceedingly limited, and consequently his experience much less than that of the general practitioner. I remain, Sir, yours truly,

A GENERAL PRACTITIONER.

Literary Society's Rooms,
Newcastle-on-Tyne, May 2, 1842.

GUY'S HOSPITAL MEDICAL SCHOOL.

Saturday, May 7, 1842.

Dr. BRIGHT, F.R.S., in the chair.

THE annual distribution of prizes awarded to the students of the hospital took place this day in the anatomical theatre.

Additional interest was imparted to the meeting by the circumstance, that on this day was first opened to public inspection the bust of the late Sir Astley Cooper, Bart. This work has been raised to the memory of this distinguished surgeon by his pupils, at a cost of four hundred guineas. The bust was executed by Mr. Towne. It was much admired as a work of art, and also on account of its being an excellent likeness of the eminent man to whose memory it is raised. It is mounted on a pedestal of white marble, five feet in height, and embellished with a fine bas relief, and has the following inscription:—"Astley Paston Cooper. Alumni Grato Animo. Hoc Marmor Posuere. 1841."

The honours were awarded as follows:—

Medicine.

First prize (gold medal), Mr. J. Vincent, Bedford; second prize (silver medal), Mr. J. H. Browne, Southton.

Materia Medica.

Second prize (silver medal), Mr. H. J. Fotherby, London; certificate, Mr. J. F. Wills, Crewkerne.

Chemistry.

First prize (books), Mr. George Ayton, Kenilworth. Certificates: Mr. T. P. Ramskill, Clapham; Mr. J. C. Fotherby, London; Mr. J. C. Forster, London.

Practical Chemistry.

Prize, Mr. Edward Garraway, Feversham.

Anatomy—Senior Division.

Equal prizes (instruments), Mr. H. M. Webb, Barnstaple; Mr. H. W. Watson, Newcastle.

Anatomy—Junior Division.

Equal prizes (instruments), Mr. J. T. Caddy, Bideford; Mr. H. A. Oldfield, London. Certificate: Mr. C. E. Pratt, Appledore.

Pathological Anatomy.

Prize (silver medal), Mr. W. W. Kershaw, Clapham.

Surgery.

First prize (instruments), Mr. C. A. Aiken, London. Certificates: Mr. H. W. Watson, Newcastle; Mr. P. W. Thompson, Brentford.

Ophthalmic Surgery.

Prize (silver medal), Mr. Caleb Rose, Swaffham.

Midwifery—Senior Division.

First prize (instruments), Mr. Caleb Rose, Swaffham. Certificate, Mr. Alfred C. Ayres, Ramsgate.

Midwifery—Junior Division.

Prize (instruments), Mr. James Vincent, Bedford. Certificate: Mr. H. W. Watson, Newcastle.

Practical Midwifery.

Certificates: Mr. Martindale Ward, Reading; Mr. W. H. Pettigrew, Woolwich.

Botany.

Equal prizes (books), Mr. H. M. Webb, Barnstaple; Mr. George Ayton, Kenilworth.

Medical Jurisprudence.

Prize (books), Mr. Walter Clegg, London. Certificates: Mr. J. Mills, Exeter; Mr. W. Chapman, Tooting.

Medical Physics.

Prize (silver medal), Mr. J. N. Watson, Newcastle. The diploma of the Physical Society granted to Drs. E. L. Birkett, D. J. T. Francis, J. B. Nevins, and Messrs. J. R Bedford and J. C. Parrott.

Clinical Report Society.

Medical certificate, Mr. Browne, Southton; surgical certificate, Mr. Alfred Poland, London. These certificates of honour are awarded to the best reporter of clinical cases.

Pupils' Physical Society.

Prize (instruments), Mr. Walter Clegg, London. This prize is awarded for the best essay on a given subject.

KING'S COLLEGE, LONDON.

DISTRIBUTION OF PRIZES.

Friday, May 6, 1842.

The Lord Archbishop of CANTERBURY in the chair.

Medical Scholarship (40l. a-year).

Scholar elected, Mr. George Johnson; prize, Mr. Inman.

DIVISION I.—*Medicine, Surgery, and Midwifery.*

First prize, George Johnson; second prize, John Percival. Certificates of honour: Henry J. Hunter, Robt. Wm. Woollcombe, J. G. Grylls.

DIVISION II.—*Materia Medica and Physiology.*

First prize, Wm. Henry Parsey; second prize, Alfred Benj. Andrews. Certificates of honour: Samuel Hopkins Steele, Thomas Hawksley.

DIVISION III.—*Anatomy and Chemistry.*

Second prize, Benj. Lancaster Jemmett. Certificates of honour: Caleb Barrett, R. Roberts.

Botany.

Prize, John Baxter Langley. Certificates of honour: M. S. Todd, J. H. Blount, S. H. Steele, H. S. Lyford.

Forensic Medicine.

Prize, R. P. Dodd. Certificates of honour: John Percival, Evan Thomas, C. W. Mann.

Comparative Anatomy.

Prize, Alfred Charles Barker.

Medical Society's Prizes.

First prize, George Johnson; second prize, John Baxter Langley.

Warneford Prizes.

First prize (gold medal, value 10*l.*, and books value 15*l.*), George Johnson; second prize (gold medal, value 5*l.*, and books value 10*l.*), George P. Atkinson.

Leathes' Prizes.

First prize (quarto Bible), Frederick J. Hensley; second prize (quarto Prayer-book), Boughton Kingdon.

Medical Associates.

George Johnson, Boughton Kingdon.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.

THE ANNUAL DISTRIBUTION OF PRIZES to the pupils most distinguished for their acquirements in the different branches of medical study during the past sessions took place on Monday, May 2, 1842.

The Rev. G. H. BOWERS, B.D., Treasurer of the Hospital, in the chair.

SUMMER SESSION, 1841.

Botany.

Silver medal, Mr. R. C. Golding, London; certificate, Mr. Elisha Noyce.

Midwifery.

Mr. R. C. Golding.

WINTER SESSION, 1841-2.

Exhibition of 15l. per Annum.

Mr. John Terry, Bath.

Medicine.

Mr. Michael Teevan, Princes-row, Kennington.

Surgery.

Senior class, first prize, Mr. John Moore, Wickham Market, Suffolk; second prize, Mr. Arthur Taylor, Nether Crawley, Luton, Beds. Junior class, first prize, Mr. J. Terry; second prize, Mr. Wm. M. Neale, Walworth.

Midwifery.

Senior classes, students of two sessions, 1. Mr. M. Teevan; 2. Mr. R. C. Golding. Students of one session, 1. Mr. John Moore; 2. Mr. W. M. Neale. Junior class, Mr. T. F. May, Butcher-row, Ratcliffe-cross.

Physiology.

Senior class (equal), Mr. R. C. Golding, Mr. John Moore. Junior class, Mr. E. Noyce.

Practical Anatomy.

Senior class, first prize, Mr. James Yate, Madeley, Salop; second prize, Mr. John Moore. Junior class, first prize, Mr. J. Terry; second prize, Mr. G. F. Burroughs, Shepton Mallet.

Chemistry.

First prize, Mr. E. Noyce; second prize, Mr. Wm. Ackland, Stawell, Somerset.

Materia Medica.

First prize, Mr. M. Teevan; second prize, Mr. E. Noyce.

Diligence and Good Conduct.

First prize, Mr. J. Terry; second prize, Mr. G. F. Burroughs.

ROYAL COLLEGE OF SURGEONS IN LONDON.

LIST of gentlemen admitted members on Friday, May 6, 1842:—Francis Nathaniel Greene; Henry Charles Curtis; Thomas Gaskell; Henry William Watson; John Perry; John Alfred Carr; Henry Dixon; George Frederick Whately; Thomas Harvey Lowry; Augustus Prater; Thomas Bridge Trowbridge; George Taylor. Admitted Monday, May 9, William Henry Carnegie; Samuel Nathaniel Elliot; Herbert Baillie; William Baillie; John Mills; Augustus Hardy Godby; James Henry Reynett; Robert Dalvelle Ward; Henry Woodward; Henry Gaskell; William Murdock; John Seare.

TO CORRESPONDENTS.

R. H. Corbets will find a reply to his question at THE LANCET office.

Dr. Budd's paper shall be published in an early number, probably in our next.

Mr. Beaumont's communication has been received.

An occasional Reader will find a reply to his question at THE LANCET office.

Communications have been received from *Mr. Courtney; Mr. Roods; Mr. Hytche; Dr. Barton; An Apothecary.*

ST. THOMAS'S HOSPITAL.—The whole of the medical and surgical lecturers of St. Thomas's Hospital have resigned their chairs. The school no longer exists; and it is supposed that the governors will remodel it, by appointing fresh men to the hospital, who will be competent to lecture, and thereby revive the once far-famed school again. The physicians and surgeons must resign their appointments, as well as their chairs. LECTOR.—May 5, 1842.

Many correspondents wish us to object to the transmission to them in England, by Dr. Martyn Payne, of Boston, U.S., of his medical pamphlets, through the medium of an expensive post, without paying the cost of their transmission.

Erratum.—The title of the letter of Dr. Dick, at p. 195 of last week's LANCET, for "Opinions of some *Phrenologists* on Phrenology," read "Opinions of some *Physiologists* on Phrenology."